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Alberta

Données sur les sédiments

1986

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OTTAWA, CANADA, 1988

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DIVISION DES RELEVÉS HYDROLOGIQUES DU CANADA
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PREFACE

This publication was prepared by personnel of the Sediment Survey Section, Water Survey of Canada Division, under the direction of the Director, Water Resources Branch, Department of the Environment, Ottawa.

The basic data were collected and compiled under the supervision of the Chief, N.W.T. Programs, Yellowknife, Northwest Territories and the Regional Chief of the Water Resources Branch at Vancouver, British Columbia.

The co-operation received from provincial agencies and from other organizations is gratefully acknowledged.

PRÉFACE

Le groupe d'étude des sédiments de la Division des relevés hydrologiques du Canada, sous l'autorité du directeur des Ressources en eau du ministère de l'Environnement, à Ottawa, a préparé la présente publication.

Le Chef des programmes des T.N.-O., à Yellowknife (Territoires du Nord-Ouest) et le chef régional de la Direction des ressources en eau, à Vancouver (Colombie-Britannique), ont supervisé la collecte et la compilation des données de base.

Nous remercions vivement les organismes provinciaux, ou autres, pour leur collaboration.

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INTRODUCTION

The Water Resources Branch of the Department of the Environment herein presents for the 1986 calendar year the annual suspended sediment data and a historical data summary for the sediment survey investigations conducted in Alberta by the Water Survey of Canada.

Data on the character and quantity of fluvial sediments provided by sediment survey investigations are intended for use in studies of water quality, environmental impacts, river processes and behaviour, and engineering design.

General introductory information on the sediment survey is included in this publication. Similar information for the associated hydrometric survey is given in the regular publications containing surface water data.

Details on individual stations and related records, as well as recent data that have not yet been published, may be obtained upon application to:

Regional Chief,
Water Resources Branch,
Department of the Environment,
Bag 2909,
Postal Station 'M',
(Room 854,
220-4th Avenue S.E.),
Calgary, Alberta.
T2P 2M7

or to the Director, Water Resources Branch, Department of the Environment, Ottawa, Ontario, K1A 0H3.

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INTRODUCTION

Dans la présente publication de la Direction des ressources en eau du ministère de l'Environnement, on trouvera les données annuelles sur les sédiments en suspension pour 1986 et le commaire des données chronologiques sur les sédiments, à la suite des études effectuées dans les cours d'eau de l'Alberta par la Division des relevés hydrologiques du Canada.

Les données recueillies sur la nature et l'importance de la charge solide dans les cours d'eau doivent servir aux études portant sur la qualité des eaux, les incidences environnementales, les processus fluviaux, le comportement des cours d'eau et la conception de projets.

La presente publication contient des renseignements généraux préliminaires sur les études des sédiments. Des renseignements semblables sur les études hydrométriques connexes sont contenus dans les publications régulières présentant des données sur les eaux de surface.

On peut obtenir des renseignements supplémentaires sur les stations et les relevés, ainsi que des données récentes non encore publiées, en s'adressant au:

Chef régional
Direction des ressources en eau
Ministère de l'Environnement
Sac postal 2909
Succursale postale 'M'
(Pièce 854,
220, Quatrième avenue S.-E.)
Calgary (Alberta)
T2P 2M7

ou au directeur des Ressources en eau, ministère de l'Environnement, Ottawa (Ontario), K1A 0H3.

SCOPE OF PUBLICATION

Descriptive information about sediment stations is given. This refers to the Location, Latitude and Longitude, Drainage Area and whether the flow is Natural Flow or Regulated Flow (the year that regulation began is given, if known), Type of Gauge and the Total Suspended Sediment Load in Tonnes for the Period of Record is also included. International Gauging Stations are identified and the names of co-operating agencies who supply data are given; unusual conditions at the sediment station that could affect the data results are explained under "Remarks".

This publication contains data on streamflow, instantaneous suspended sediment concentration; daily mean suspended sediment concentration; daily suspended sediment loads; dissolved solids concentration; load summary; particle-size distribution of suspended sediment in percent sand, silt and clay; bed load and bed material; water temperature when samples were collected; type of sampler and the single sampling vertical location.

A historical sediment data summary includes such information as Sampled Concentration Maximum and Minimum; Suspended Sediment Load Maximum Daily and the Total for Period. The Period of Record and the Type of Operation for each year of data are also given. A Summary for the Months of record gives the Period of Record Mean, the Mean for Period of Record and the Standard Error of Mean as a percent.

HISTORY AND OBJECTIVES OF SEDIMENT SURVEYS IN CANADA

In Canada, investigations of sediment transported by streams were first undertaken by individual organizations or agencies in 1948, to meet the needs of federal and provincial agencies for assessment of particular projects. Although the investigations were extended to meet expanding needs after 1948, it was not until 1961 that a systematic survey was undertaken by the Water Resources Branch.

The sediment survey program has the following objectives:

(1) Collection and provision of data related to sediment transport in Canadian rivers for applications in water resource engineering, water quality and environmental studies.

(2) Provision of information and advice related to sediment transport.

(3) Assessment, improvement and standardization of equipment and techniques used in Canada's sediment survey program.

PUBLICATION OF SURFACE WATER AND SEDIMENT DATA

Sediment data have been published in a variety of formats since the beginning of the Sediment Survey Program.

PORTÉE DE LA PUBLICATION

Des données descriptives sont présentées sur les stations d'étude des sédiments. Elles concernent leur emplacement, leurs latitude et longitude, leur bassin versant, la nature de débit (naturel ou régularisé, avec indication, le cas échéant, de l'année où la régularisation a commencé, si elle est connue), le type d'instrument de mesure employé et le débit total des sédiments en suspension (en tonnes) pour la période de relevé. Les stations internationales de jaugeage sont indiquées, ainsi que le nom des organismes qui fournissent les données. Des explications concernant des conditions exceptionnelles qui ont pu influer sur les résultats sont présentées dans la partie «Remarques».

Cette publication renferme des données sur le débit des cours d'eau, les concentrations instantanées de sédiments en suspension, les concentrations journalières moyennes de sédiments en suspension, les débits journaliers de sédiments en suspension, les concentrations de matières dissoutes, les débits solides totaux (résumés), la granulométrie des sédiments en suspension exprimée en pourcentage de sable, de limon et d'argile, le charriage et les matériaux du lit, la température de l'eau au moment de l'échantillonnage, le type d'échantillonneur employé et l'emplacement des verticales de prélèvement d'échantillons uniques.

Un résumé des données historiques sur les sédiments est inclus. On y trouve divers renseignements comme les concentrations maximale et minimale mesurées, le débit journalier maximal des sédiments en suspension et le total pour la période. La période de relevé et le type d'exploitation des stations sont indiqués pour chaque année. Dans un résumé pour les mois de relevé, on donne la moyenne pour chaque période et pour l'ensemble des périodes de relevé ainsi que l'erreur-type de la moyenne, en pourcentage.

HISTORIQUE ET OBJECTIFS DES ÉTUDES DES SÉDIMENTS AU CANADA

Au Canada, les études dans ce domaine ont débuté en 1948 en réponse aux besoins exprimés par certains organismes fédéraux et provinciaux pour l'évaluation de projets donnés et étaient le fait d'organismes privés. Bien que les études se soient poursuivies après 1948 pour satisfaire aux besoins accrus, ce n'est qu'en 1961 que la Direction des ressources en eau les a entreprises de façon systématique.

Les buts de ces études sont de:

(1) réunir et produire des données sur les transports solides dans les cours d'eau canadiens, données dont on peut avoir besoin pour des études concernant l'environnement, la qualité des eaux et la conception de projets portant sur les ressources en eau.

(2) produire des informations concernant les transports solides.

(3) évaluer, améliorer et uniformiser le matériel et les techniques employés dans le programme d'étude des sédiments au Canada.

PUBLICATION DES DONNÉES SUR LES EAUX DE SURFACE ET LES SÉDIMENTS

Depuis le début du programme d'étude des sédiments, la présentation des données a varié.

During the years 1948 to 1960, some sediment data were collected for several Prairie rivers to meet the needs of particular projects. The first Water Resources Paper series containing sediment data incorporated a selection of these data and also data for part of the year ending September 30, 1961, at stations established for the continuing program. The second issue was a biennial publication covering only the continuing program for the 1962 and 1963 water years. All subsequent editions titled *Sediment Data Canadian Rivers* have been published annually. The sediment data since 1978 have been presented entirely in the International System of Units (SI).

Commencing with 1984, the *Sediment Data* were published in a new format wherein Canada was divided into eight regions. The provinces each represent a separate region except for New Brunswick, Newfoundland, Nova Scotia and Prince Edward Island, which together form the Atlantic Provinces region, and the Yukon and Northwest Territories which make up another. The publications are identified by the province or territories covered and the year in which the data were collected. These data are published annually on a calendar-year basis and the stations are listed alphabetically.

A new edition, *Miscellaneous Sediment Data 1966 to 1983*, was published. It contains a tabulation of locations in Canada where miscellaneous data were collected but not previously published by the Water Survey of Canada. The following data are included in this one time publication: date and time of sample collection; instantaneous discharge or daily mean discharge; sampling vertical; instantaneous concentration; dissolved solids for some samples; type of sampler used; particle size distribution of suspended sediment in percent sand, silt and clay for some depth integrated samples and/or measurements, and some point integrated measurements; particle size distribution of bed load; particle size distribution of bed material; and the water temperature at time of sampling for some samples is also given where available.

The first edition of a *Sediment Data Reference Index* was published for data to 1972. It contains a tabulation of locations in Canada where sediment data were collected by the Water Survey of Canada. The index has been subdivided alphabetically by province or territory, with sediment survey stations also listed alphabetically. Commencing with the 1978 publication, data are presented in the International System of Units (SI) and will continue to be published biennially. The latest edition supersedes all previous editions because it contains any corrections or additions since the last publication.

The first edition of a new publication series titled *Historical Sediment Data Summary for Canadian Rivers* was produced for data to 1974. This publication contains a summary of historical monthly and annual mean suspended sediment load, and annual extremes of daily suspended sediment concentration and loads and total annual suspended load. Commencing with the 1978 publication, data are presented entirely in the International System of Units (SI). This publication has been discontinued, as much of the information is now included in the new annual *Sediment Data* publication.

De 1948 à 1960, on a recueilli des données pour plusieurs cours d'eau des Prairies en prévision de la réalisation de certains projets. La première publication contenant des données sur les sédiments a paru dans la série intitulée *Water Resources Paper*; elle présentait un choix de ces données ainsi que des données recueillies en 1961 avant le 30 septembre à des stations établies pour la réalisation du programme permanent. La deuxième publication a porté sur les données recueillies dans le cadre du programme au cours des années hydrologiques 1962 et 1963. Par la suite, les données ont été publiées annuellement sous le titre *Données sur les sédiments - rivières canadiennes*. Depuis 1978, les données sont exprimées en unités du Système international (SI).

En 1984, la présentation des *Données sur les sédiments* a été modifiée. Le Canada a été divisé en huit régions, une région pour chaque province, sauf le Nouveau-Brunswick, Terre-Neuve, la Nouvelle-Écosse et l'Île-du-Prince-Édouard qui, ensemble, forment la région des provinces de l'Atlantique, et les Territoires du Yukon et du Nord-Ouest, qui forment une autre région. Les publications sont nommées selon la région couverte et l'année des données (année civile). Ces publications sont annuelles. Les stations y sont présentées par ordre alphabétique.

Une édition récente intitulée *Données diverses sur les sédiments, 1966 à 1983* vient de paraître. On y présente sous forme de tableau les emplacements où des données diverses non encore publiées ont été recueillies au Canada par la Division des relevés hydrologiques. Cette première édition comprend des données telles que : la date et la durée de l'échantillonnage; le débit instantané ou débit journalier moyen; la verticale d'échantillonnage; les concentrations instantanées; les concentrations de matières solides en solution pour certains échantillons; le type d'échantillonneur employé; la granulométrie des sédiments en suspension en pourcentage de sable, de limon et d'argile, dans le cas de mesures avec intégration selon la profondeur ou d'échantillons intégrés sur toute la profondeur, et dans le cas de mesures par la méthode ponctuelle; la granulométrie du charriage; la granulométrie des matériaux du lit; la température de l'eau lors du prélèvement d'échantillons, lorsque celle-ci est connue.

Un *Index de référence des données sur les sédiments* est publié. La première édition portait sur les données disponibles jusqu'en 1972. Les emplacements où des données sur les sédiments ont été recueillies au Canada par la Division des relevés hydrologiques y sont présentés sous forme de tableau. L'*Index* est subdivisé selon l'ordre alphabétique par province ou territoire, et les stations de mesure des sédiments sont classées par ordre alphabétique. À partir de 1978, les données sont exprimées en unités du Système international (SI). L'*Index* est publié tous les deux ans; l'édition la plus récente annule toutes les éditions antérieures, car elle renferme toutes les corrections et mises à jour effectuées depuis la dernière parution.

Une autre série de publications a porté le titre *Sommaire chronologique des données sur les sédiments de rivières canadiennes*. La première édition renfermait les données disponibles jusqu'en 1974. Cette série présentait un résumé donnant les moyennes mensuelles et annuelles historiques du débit des sédiments en suspension, les valeurs annuelles extrêmes de la concentration journalière et du débit journalier des sédiments en suspension et le débit annuel total des sédiments en suspension. À partir de 1978, les données ont été présentées en unités du Système international (SI). Cette série a été abandonnée, car une bonne partie de l'information est maintenant contenue dans la nouvelle publication annuelle intitulée *Données sur les sédiments*.

COLLECTION AND PROCESSING OF BASIC DATA

1. *Equipment and Instrumentation*

The sediment survey program of the Water Resources Branch is conducted in cross sections on rivers selected specifically for the sediment survey or for the hydrometric survey. Certain cross sections are located at traffic bridges, while others are equipped with cableways, or automatic pump samplers.

The following sediment samplers have been used in the sediment survey program:

(a) Depth-integrating suspended sediment wading-type hand sampler, USDH-48, used on small streams or during winter periods.
(b) Depth-integrating suspended sediment sampler, USDH-59, used as a handline suspension for small and medium size streams.
(c) Depth-integrating suspended sediment samplers, USD-49, and USD-74, used on a reel suspension for medium and large streams whose depths are less than five metres.

(d) Point-integrating suspended sediment samplers, USP-61, USP-61-A1, USP-63, and USP-72, used for point-integrating sampling, or depth-integrating sampling if the depth is over five metres, or in a cross section with velocities up to two metres per second.
(e) Automatic pump sampler is an automatic pumping system permitting unattended collecting and bottling of individual water samples pumped from a fixed point in a stream. This sampler is normally installed at isolated locations where otherwise no data would be available during ice break-up or peak periods.

(f) Bed material sampler, USBM-54, used on large or deep streams or on those streams with hard-packed streambeds.

(g) Bed material sampler, USBMH-60, used on some large or deep streams or on those streams with soft-packed streambeds.

(h) Bed material sampler, USBMH-53, used on some small or shallow streams.

(i) Lane bed material sampler, a drag-type sampler used on small streams or those with soft streambeds.

2. *Hydrometric Surveys*

The hydrometric survey includes the standard procedures for observations of water levels, streamflow measurements, water surface slope determinations if required, and observations of water temperature. The streamflow measurements are made in conjunction with the sediment load measurements and conform to the accepted standards of the regular hydrometric survey.

3. *Sediment Sampling Program*

The following is a summary of the elements associated with the Sediment Sampling Program:

(a) Periodic measurement of suspended sediment load by the

COLLECTE ET TRAITEMENT DES DONNÉES DE BASE

1. *Matériel*

L'étude des sédiments réalisée par la Direction des ressources en eau porte sur des sections transversales de cours d'eau choisis spécialement à cette fin ou pour les relevés hydrométriques. Certaines sections sont situées sous un pont, d'autres sont accessibles par téléphérique, ou sont étudiées à l'aide d'un échantillonneur sous pression.

On a utilisé les échantillonneurs suivants:

(a) L'échantillonneur intégrateur selon la profondeur, type simple, USDH-48, employé dans les cours d'eau peu profonds ou en hiver;
(b) L'échantillonneur intégrateur selon la profondeur USDH-59, utilisé comme une ligne dans les cours d'eau petits et moyens;
(c) Les échantillonneurs intégrateurs selon la profondeur USD-49 et USD-74 fixés au bout d'une corde s'enroulant autour d'un moulinet et employés dans les cours d'eau gros ou moyens dont la profondeur est inférieure à cinq mètres;
(d) Les échantillonneurs intégrateurs USP-61, USP-61-A1, USP-63 et USP-72, employés ponctuellement ou sur toute la verticale, et utilisés lorsque la profondeur est supérieure à cinq mètres ou dans les sections transversales qui connaissent un débit qui atteint 2 m/s.
(e) Un échantillonneur automatique permettant le prélèvement en bouteilles, sans surveillance, d'échantillons uniques d'eau obtenus à l'aide d'une pompe en un point précis d'un cours d'eau; il est ordinairement installé dans un endroit isolé où aucune donnée ne pourrait être obtenue autrement au cours de la débâcle ou des périodes de débit de pointe;
(f) L'échantillonneur USBM-54 employé pour le prélèvement d'échantillons des matériaux du lit dans les cours d'eau importants ou profonds ou dans les cours d'eau dont le fond est dur;
(g) L'échantillonneur USBMH-60 employé pour le prélèvement d'échantillons des matériaux du lit dans certains cours d'eau importants ou profonds, ou dans les cours d'eau dont le fond est meuble;
(h) L'échantillonneur USBMH-53 employé pour le prélèvement d'échantillons des matériaux du lit dans certains cours d'eau petits ou peu profonds;
(i) La drague employée pour le prélèvement d'échantillons des matériaux du lit dans de petits cours d'eau ou dans des cours d'eau dont le fond est meuble.

2. *Relevés hydrométriques*

Le relevé hydrométrique comprend, entre autres, l'observation de la hauteur des eaux, la mesure du débit de l'eau, la détermination de la pente de la ligne d'eau, si nécessaire, ainsi que l'observation de la température de l'eau. Les mesures du débit de l'eau et du débit des sédiments se font conjointement, suivant les méthodes acceptées.

3. *Échantillonnage des sédiments des cours d'eau*

L'échantillonnage comporte, en gros, les éléments suivants:

(a) La mesure périodique du débit des sédiments en suspension par la méthode d'intégration sur toute la profondeur

depth-integrating method for determining the average suspended sediment concentration in the cross section.

(b) Single suspended sediment samples at a selected vertical for determining the sediment concentration for the days when suspended sediment load measurements are not taken.

(c) Limited measurement of suspended sediment load by the point-integrating method for checking depth-integrated measurements and for determining particle-size distribution in the cross section.

(d) Sampling of bed material for determining particle-size distribution.

(e) Periodic measurement of bed load.

The following is a brief explanation of the elements listed above:

(a) *Suspended Sediment Load by Depth-Integrating Method*: Measurements are made by the depth-integrating method to determine the suspended sediment load in the entire cross section of a stream, the average suspended sediment concentration in the cross section, and the size distribution of the sediment particles. It is known that the concentration of suspended sediment tends to increase from the water surface to the streambed and could vary from streambank to streambank.

When making suspended sediment equal-discharge-increment (EDI) measurements, the stream cross section is divided into at least five equal-flow panels and a representative suspended sediment sample is collected from each portion. For each panel of the cross section, the suspended sediment load (r) may then be computed by multiplying the flow (q) by the suspended sediment concentration (c):

$$r = q\ c$$

The suspended sediment load (R) for the cross section may be computed by adding the sediment loads for the five equal-flow panels:

$$R = r\ n = q_1c_1 + q_2c_2 + \ldots + q_nc_n$$

The depth-integrating method of sampling is used to measure the suspended sediment concentration. This method is based on the premise that the sampler fills at a rate proportional to the velocity of the approaching flow, and that by traversing the depth of a stream at a uniform speed, the sampler will receive a portion of water sediment mixture at every point in the vertical.

(b) *Single Suspended Sediment Samples at a Selected Vertical*: Single suspended sediment samples, consisting of two bottles each, are collected routinely using the depth or point-integrating samplers at a permanently fixed vertical in a cross section. During periods of very heavy sediment concentration, two or three single sediment samples may be taken per day, while during periods of low concentration, one single sediment sample may only be taken every few days. During extremely low flow periods, the sampling may be limited to one single sample in several weeks or months.

(c) *Suspended Sediment Load by Point-Integrating Method*: A limited number of suspended sediment load measurements are made by the point-integrating method. These measurements are included in the program (a) to check by comparison the "measured" sediment loads obtained by the depth-integrating method with the suspended sediment loads by the point-integrating method and (b) to obtain samples from which to determine particle-size distribution

pour la détermination de la concentration moyenne dans une section transversale;

(b) Le prélèvement d'échantillons uniques des sédiments en suspension selon une verticale choisie, afin de déterminer la concentration des sédiments les journées où le débit des sédiments en suspension n'est pas mesuré;

(c) Un nombre restreint de mesures du débit des sédiments en suspension avec intégration en un point précis d'un cours d'eau, afin de vérifier les résultats des mesures avec intégration selon la profondeur et afin de déterminer la granulométrie des particules de sédiments dans une section transversale d'un cours d'eau;

(d) L'échantillonnage des matériaux du lit afin d'en déterminer la granulométrie;

(e) La mesure périodique du charriage.

Voici une brève description des éléments susmentionnés.

(a) *Mesure du débit des sédiments en suspension par intégration selon la profondeur*: La méthode permet de déterminer le débit des sédiments en suspension traversant toute une section transversale d'un cours d'eau, la concentration moyenne des sédiments en suspension dans la section transversale et la granulométrie des sédiments en suspension. C'est un fait connu que la concentration des sédiments en suspension augmente généralement avec la profondeur et qu'elle peut varier d'une rive à l'autre d'un cours d'eau.

Avec la méthode d'incréments de débits égaux (IDE), la mesure du débit des sédiments en suspension se fait en divisant une section transversale d'un cours d'eau en au moins cinq tranches où le débit est égal et en prélevant un échantillon représentatif dans chacune d'elles. Le débit des sédiments en suspension (r) pour chaque tranche se calcule en multipliant le débit (q) par la concentration des sédiments en suspension (c):

$$r = q\ c$$

Le débit des sédiments en suspension (R) pour la section transversale est la somme des débits des sédiments des cinq tranches:

$$R = r\ n = q_1c_1 + q_2c_2 + \ldots + q_nc_n$$

La méthode par intégration sur toute la profondeur est employée pour mesurer la concentration des sédiments en suspension. Elle suppose que l'échantillonneur se remplit à un rythme proportionnel au débit de l'eau et qu'en étant déplacé à une vitesse uniforme sur toute la verticale, il reçoit une partie du mélange eau-sédiments à tous les points de celle-ci.

(b) *Prélèvement d'échantillons uniques de sédiments en suspension sur une verticale choisie*: De tels échantillons, constitués chacun de deux bouteilles, sont prélevés régulièrement à l'aide d'appareils intégrateurs, selon la profondeur ou ponctuels, sur une verticale permanente d'une section transversale. Lorsque la concentration des sédiments est très forte, deux ou trois échantillonnages peuvent être effectués chaque jour, alors qu'un seul échantillon peut être prélevé à quelques jours d'intervalle lorsqu'elle est faible. Au cours des périodes où le débit est extrêmement faible, l'échantillonnage peut être limité à un échantillon toutes les quelques semaine ou tous les quelques mois.

(c) *Mesure du débit des sédiments en suspension par la méthode ponctuelle*: Un nombre limité de mesures du débit des sédiments en suspension sont faites avec cette méthode. On y a recours a) pour vérifier les valeurs du débit mesurées au moyen de la méthode précédente et b) pour obtenir des échantillons en vue de déterminer la granulométrie des sédiments en divers points de la

at different points in the cross section. The point-integrating sediment loads are computed by graphical methods.

The relationship between the suspended sediment concentration of the single vertical samples and the average concentration in the cross section determined from the suspended sediment load measurements is established for some stations. Using this relationship, the sediment concentrations of the single vertical samples are adjusted to reflect the average suspended sediment concentration in the cross section. These average sediment concentrations in the cross sections are plotted, and a smooth curve is drawn through the points to obtain a concentration graph. This graph represents the average suspended sediment concentration for the period of record. The daily mean concentrations are determined by automated procedures using a digitizer interfaced with a Digital minicomputer.

The daily suspended sediment loads are computed on the basis of stream discharges and the collected suspended sediment concentrations. The daily suspended sediment loads are expressed in tonnes per day and are obtained by multiplying the daily mean sediment concentration (mg/L), by the daily mean discharge (m^3/s), and the conversion factor, 0.0864.

(d) *Bed Material Sampling*: In a cross section, bed material samples are usually taken in the same sampling verticals as the suspended sediment samples. Often, additional bed material samples are collected at the water edge, the extreme water level or at other points in the cross section. The total number of bed material samples taken in a cross section usually varies between five and nine.

(e) *Bed Load Measurement*: There are several methods available for measurement of bed load (volumetric method, measurement by samplers, method of tracers, method of constricted cross section, study of sound waves, etc.). The measurement methods should be selected in accordance with river regime.

4. *Total Sediment Load*

Sediment transport may be divided into two categories: sediment maintained in suspension in the stream (suspended load), and sediment being carried along the streambed (bed load). To measure the total sediment load, each of these must be measured separately and then totalled. The total sediment load was not computed for this publication.

5. *Sediment Survey Laboratories*

The Water Resources Branch maintain sediment survey laboratories in New Westminster, British Columbia; Regina, Saskatchewan; Guelph, Ontario; and Moncton, New Brunswick. The laboratories are equipped to perform the following analyses:

(a) determination of sediment concentration by (1) filtration method, (2) evaporation method and (3) determination of total dissolved solids by evaporation method.
(b) particle-size distribution analysis by (1) bottom withdrawal tube method, (2) sieving and (3) hydrometer method.

Determination of the sediment concentration by the evaporation method is carried out by evaporating the water from the settled sediment sample, with the results being corrected for dissolved solids. The quantity of dissolved solids is determined by evaporating a portion of the decanted water of a sample. In the filtration method, the suspended sediment concentration of water samples is determined by utilizing Gooch crucibles with a Reeve Angel 934AH filter and a Millipore AP20 prefilter and a vacuum system.

section transversale. Cette méthode fait appel à des graphiques pour le calcul du débit des sédiments.

Le rapport entre la concentration des sédiments en suspension dans les échantillons prélevés sur une seule verticale et la concentration moyenne dans la section transversale, telle que déterminée à partir des mesures du débit des sédiments en suspension, est établi pour quelques stations. Il permet de corriger les concentrations mesurées à une seule verticale de manière à donner la concentration moyenne dans la section transversale. Les concentrations moyennes ainsi déterminées sont reportées sur un graphique, et une courbe lisse passant par les points marqués est tracée. Le graphique obtenu représente la concentration moyenne des sédiments en suspension pour la période de relevé. Les concentrations moyennes quotidiennes sont déterminées automatiquement à l'aide d'un convertisseur analogique-numérique relié à un mini-ordinateur numérique.

Les valeurs journalières du débit des sédiments en suspension sont calculées à partir du débit du cours d'eau et des concentrations des sédiments en suspension recueillis. Elles sont exprimées en tonnes par jour. On les détermine en multipliant la concentration moyenne journalière des sédiments (mg/L) par le débit moyen journalier (m^3/s) et par un facteur de conversion approprié, 0.0864.

(d) *Échantillonnage des matériaux du lit*: Dans une section transversale, les échantillons des matériaux du lit sont ordinairement prélevés aux mêmes verticales que ceux des sédiments en suspension. Souvent, des échantillons supplémentaires sont pris près des rives, là où le niveau d'eau est extrême et à d'autres points de la section transversale. Leur nombre total pour une section donnée varie ordinairement entre cinq et neuf.

(e) *Mesure du charriage*: La mesure peut se faire par plusieurs méthodes (méthode volumétrique, mesure à l'aide d'échantillonneurs, méthode des traceurs, méthode de la section transversale rétrécie, étude des ondes sonores, etc.). Le choix se fondera sur la nature du régime du cours d'eau.

4. *Débit solide total*

Il y a deux catégories de sédiments: les sédiments maintenus en suspension au sein de l'eau (sédiments en suspension), et les sédiments charriés sur le lit d'un cours d'eau (charriage de fond). Les deux types de sédiments doivent être mesurés séparément et leurs valeurs additionnées si on veut mesurer le débit total des sédiments. Toutefois, on ne l'a pas calculé aux fins de la présente publication.

5. *Laboratoires d'analyse*

La Direction des ressources en eau possède des laboratoires d'analyse des sédiments à New Westminster (Colombie-Britannique), Regina (Saskatchewan), Guelph (Ontario) et Moncton (Nouveau-Brunswick). Les laboratoires disposent des appareils nécessaires pour effectuer les analyses suivantes:

(a) la détermination de la concentration des sédiments par (1) filtration, (2) évaporation, et (3) détermination des matières dissoutes totales par évaporation.
(b) l'analyse granulométrique (1) par extraction des sédiments déposés dans un tube, (2) par l'emploi de tamis et (3) par l'utilisation d'un hydromètre.

La méthode par évaporation consiste à faire évaporer l'eau d'un échantillon de sédiments décanté et à corriger les résultats pour tenir compte des matières dissoutes. La quantité de celles-ci est déterminée en faisant évaporer une partie de l'eau de l'échantillon décanté. Dans la méthode par filtration, on utilise sous vide des creusets de Gooch munis d'un filtre Reeve Angel 934AH et d'un préfiltre Millipore AP20.

Particle-size analysis was carried out for some suspended sediment samples having gross weights in the range of 0.15 to 5 g using the Bottom Withdrawal Tube method. The particle-size distribution of the Bottom Withdrawal Tube method ranges from 0.002 to 1.000 mm. The Sieve analysis method may be used for samples with a large amount of material coarser than 0.062 mm.

The particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)
Clay	0.000 24 – 0.004
Silt	0.004 – 0.062
Sand	0.062 – 2.0
Gravel	2.0 – 64.0

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analyzed in distilled water. Chemical dispersion is not used for native-water analysis.

6. *Accuracy and Reliability of Field Data and Computed Results*

The overall accuracy and degree of reliability of the sediment data is dependent upon many factors. Some of the more important of these are:

(a) accuracy and reliability of streamflow records;
(b) regime of the river;
(c) type of sampling equipment used to collect the suspended sediment samples;
(d) frequency of suspended sediment discharge measurements;
(e) frequency of individual sampling;
(f) quality of the relationship between the average suspended sediment concentration in the cross section and the concentration of the individual samples;
(g) frequency and method of bed material sampling;
(h) frequency and method of bed load measurements;
(i) accuracy and reliability of the laboratory analysis;
(j) selected methods of computation of the suspended sediment discharge;
(k) interpretation and extrapolation of sediment records.

An assessment of the quality of the records can be made by an examination of the occurrence of the symbol (S) on the daily mean concentrations.

In general, data collected during open-water periods are more reliable than those collected during periods of ice conditions or those records obtained by estimation. Further, water level data collected utilizing a water-stage recorder are more reliable and accurate than those using a manual gauge only, especially for small or flashy streams.

Une analyse granulométrique a été effectuée pour certains échantillons de sédiments en suspension ayant un poids brut dans l'intervalle de 0.15 à 5 g par la méthode de la burette (extraction des sédiments déposés, à divers intervalles). La distribution de la taille des particules déterminée par cette méthode varie de 0.002 à 1.000 mm. La méthode de tamisage peut être employée pour les échantillons ayant une forte quantité de particules de taille supérieure à 0.062 mm.

La classification granulométrique qui est utilisée dans la présente publication est conforme aux recommandations faites par l'*American Geophysical Union Subcommittee on Sediment Terminology*. La classification est la suivante:

Classification	Taille (mm)
Argile	0.000 24 – 0.004
Limon	0.004 – 0.062
Sable	0.062 – 2.0
Gravier	2.0 – 64.0

La répartition granulométrique qui est fournie dans cette publication, n'est pas obligatoirement représentative de toutes les particules qui sont transportées par un cours d'eau donné. La plupart des matières organiques sont extraites de l'échantillon qui est ensuite soumis à une dispersion mécanique et chimique avant d'être analysé dans de l'eau distillée. La dispersion chimique ne sert pas à l'analyse de l'eau naturelle.

6. *Exactitude des données et des résultats*

L'exactitude des données sur les sédiments dépend de nombreux facteurs. On peut citer, parmi les plus importants:

(a) l'exactitude des données sur les débits;
(b) le régime d'un cours d'eau;
(c) le type d'appareil d'échantillonnage utilisé pour prélever les échantillons de sédiments en suspension;
(d) la fréquence des mesures du débit des sédiments en suspension;
(e) la fréquence des échantillonnages isolés;
(f) la qualité du rapport entre la concentration moyenne des sédiments en suspension dans une section transversale et la concentration des échantillons isolés;
(g) la fréquence des échantillonnages des matériaux de fond et la méthode utilisée;
(h) la fréquence des mesures du charriage de fond et la méthode utilisée;
(i) l'exactitude des analyses de laboratoire;
(j) les méthodes de calcul du débit des sédiments en suspension;
(k) l'interprétation et l'extrapolation des données sur les sédiments.

La qualité des données peut être évaluée d'après la fréquence d'utilisation du symbole (S), avec les données sur la concentration journalière moyenne.

En général, les données recueillies au cours des périodes d'eau libre sont plus sûres que celles qui sont obtenues au cours des périodes de glaces ou par estimation. De plus, les données sur le niveau des eaux qui sont mesurées à l'aide d'un limnigraphe sont plus certaines et plus exactes que celles qui sont mesurées à l'aide d'une jauge manuelle seulement, surtout dans le cas des petits cours d'eau ou des cours d'eau à crues très rapides.

METHOD OF TABULATION OF SEDIMENT DATA

For stations where the suspended sediment load was obtained, the following data are given where available:

1. The table of *Suspended Sediment Load* includes the daily mean discharge in cubic metres per second, the daily mean concentration in milligrams per litre, and the daily suspended sediment load in tonnes per day. The total monthly discharge and total monthly sediment load are also given for each month of record.

For stations where the sediment load in tonnes per day are produced for complete or partial years, the *Total Suspended Load* for the period is given in the descriptive information.

For stations where only suspended sediment concentrations are obtained, the table of *Suspended Sediment Load* will not be given.

Additional descriptive information about the sediment station is also given and will indicate the following, where applicable.

Location – the latitude and longitude co-ordinates of the location of the gauge are given. For stations where the gauge is located an appreciable distance from the discharge measurement section, these co-ordinates give the location of the discharge measurement section.

Drainage area – refers to that area enclosed by a topographic divide such that direct surface runoff from precipitation would drain by gravity into the stream upstream from the location of the station.

Type of Flow – where the flow is known to be natural, this is indicated. The flow of water in many river systems is affected by upstream regulation. In some cases, the extent of this regulation is not known and therefore is not indicated. However, where the regulation is known to be "appreciable", this is indicated as well as the year that the regulation began, if known.

Type of Gauge – refers to the installation or method used to obtain water level or discharge data:

(a) Manual – a non-recording type of gauge from which observations of stage normally are obtained once daily.

(b) Recording – a water-stage recorder from which continuous water levels are obtained on an analog chart. For most International Gauging Stations located in the United States, water level records are obtained utilizing a digital recorder.

International Gauging Station – on waters adjacent to the international boundary, certain gauging stations have been

PRÉSENTATION DES TABLEAUX DE DONNÉES SUR LES SÉDIMENTS

Pour les stations de mesure du débit des sédiments en suspension, les données suivantes sont présentées, pour autant qu'elles sont disponibles:

1. Le tableau concernant le *débit des sédiments en suspension* (The table of Suspended Sediment Load) donne le débit journalier moyen de l'eau, en mètres cubes par seconde, la concentration journalière moyenne, en milligrammes par litre, et le débit journalier des sédiments en suspension, en tonnes par jour. Chaque mois les données indiquent également les débits mensuels totaux de l'eau et des sédiments.

Dans le cas des stations où le débit des sédiments, en tonnes par jour, est fourni pour une année complète ou une partie de l'année, le total pour la période est indiqué.

Dans le cas des stations où seule la concentration des sédiments en suspension est obtenue, ce tableau est absent.

Des renseignements descriptifs additionnels au sujet de la station sont également présentées. On peut y apporter les précisions suivantes:

Emplacement (Location) – La latitude et la longitude de la station de jaugeage sont indiquées. Dans les cas où l'équipement de mesure est situé à une bonne distance de la section où le jaugeage est effectué, on indique les coordonnées de cette section.

Superficie du bassin versant (Drainage area) – Désigne la zone délimitée par une ligne de faîte de sorte que l'écoulement de surface direct provenant des précipitations est entraîné par gravité vers le cours d'eau, en amont de la station.

Type de débit (Type of Flow) – Un débit reconnu comme naturel est indiqué. Le débit de nombreux réseaux hydrographiques est modifié par une régularisation effectuée en amont. Dans certains cas, l'importance de cette régularisation n'est pas connue, et elle n'est donc pas indiquée. Cependant, quand on sait que la régularisation est d'une certaine importance, on l'indique, ainsi que l'année où elle a débuté (si elle est connue).

Type de jauge (Type of Gauge) – Il s'agit des jauges ou des méthodes de jaugeage utilisées pour obtenir les données sur le niveau ou le débit d'un cours d'eau.

(a) *Manuel* (Manual) – Indique qu'un appareil non enregistreur est employé pour obtenir normalement une fois par jour les données sur le niveau et le débit du cours d'eau.

(b) *Enregistreuse* (Recording) – Indique qu'un limnigraphe permet de mesurer de façon continue le niveau des eaux qui est tracé sur un graphique. La plupart des stations internationales de jaugeage des États-Unis obtiennent les données sur le niveau des eaux à l'aide d'un enregistreur numérique.

Station internationale de jaugeage (International Gauging Station) – Dans les eaux contiguës aux frontières, on a

designated as "International" and records are approved jointly. Differences between figures published herein and corresponding figures in United States Water Supply Papers are due to variations in automated data processing techniques.

Contributed Data – if data were supplied in their entirety or partially by an outside agency, the name of this co-operating agency is given.

Remarks – contains a statement pertaining to the sediment sample collection.

2. The table of *Instantaneous Suspended Sediment Concentration* for depth-integrating samples includes the following: Date and Time of the sample collection; Water Temperature; Instantaneous Discharge at time of sampling, (if not available the daily mean discharge is given and indicated by a symbol); Single Sampling Vertical location; Dissolved Solids; Percent Sand, Silt and Clay; Type of Sampler used. The particle-size distribution of Sand, Silt and Clay, in percent is given where available.

The Single Sampling Vertical Location is defined by many symbols, which are as follows, where applicable:

DIGITS - 5, 14, 130, etc., is the distance in metres from the initial point
WERB - Water's Edge RIGHT Bank
WELB - Water's Edge LEFT Bank
1QRB - One-quarter the distance FROM the RIGHT Bank
3QRB - Three-quarters the distance FROM the RIGHT Bank
1QLB - One-quarter the distance FROM the LEFT Bank
3QLB - Three-quarters the distance FROM the LEFT Bank
MID - MID STREAM
MULT - Composite sediment measurement

For the suspended sediment measurements, the Date; Time; Water Temperature at time of sampling; Discharge computed for each sampling panel; Concentration; Sampling Vertical; Dissolved Solids; Percent Sand, Silt and Clay; Type of Sampler used; and the Particle-size distribution of the Sand, Silt and Clay, in percent is given where available.

3. The table of *Point Integrating Particle-size of Suspended Sediment* includes the following: Date and Time of the sample collection; Water Temperature; Panel Discharge for each sampling vertical; Sampling Vertical; Depth of Sample; Concentration of Sample in milligrams per litre; Dissolved Solids, in milligrams per litre, and the Particle-size distribution in percent of the Sand, Silt and Clay are also given.

désigné certaines stations comme «internationales», et les données obtenues sont approuvées par les pays concernés. Les différences entre les chiffres publiés dans la présente publications et dans les *United States Water Supply Papers* sont dues à des variantes dans les techniques de traitement automatique des données.

Données fournies (Contributed Data) – Lorsqu'un organisme extérieur a fourni toutes les données ou une partie des données, son nom est indiqué.

Remarques (Remarks) – Renseignements au sujet du prélèvement des échantillons de sédiments.

2. Le tableau des *concentrations instantanées de sédiments en suspension* (The table of Instantaneous Suspended Sediment Concentration) pour les échantillons obtenus par intégration selon la profondeur comprend: la date et l'heure de prélèvement; la température de l'eau; son débit instantané au moment de l'échantillonnage (s'il n'est pas connu, le débit journalier moyen, avec symbole); l'emplacement de la verticale d'échantillonnage; la concentration des matières dissoutes; les pourcentages de sable, de limon et d'argile; le type d'échantillonneur employé; et la granulométrie du sable, du limon et de l'argile, en pourcentage des particules est donnée lorsqu'elle est disponible.

Le site vertical d'échantillonnage unique est défini par plusieurs symboles dont les suivants dans certains cas :

CHIFFRE - 5, 14, 130, etc., désigne la distance en mètres à partir du point initial
WERB - Bord de l'eau, rive DROITE
WELB - Bord de l'eau, rive GAUCHE
1QRB - Un quart de la distance À PARTIR de la rive DROITE
3QRB - Trois quarts de la distance À PARTIR de la rive DROITE
1QLB - Un quart de la distance À PARTIR de la rive GAUCHE
3QLB - Trois quarts de la distance À PARTIR de la rive GAUCHE
MID - MI-DÉBIT
MULT - Mesure des sédiments mixtes

Pour les mesures des sédiments en suspension, la date, l'heure, la température de l'eau au moment de l'échantillonnage, le débit calculé pour chaque tranche de la section d'échantillonnage, la concentration et la verticale d'échantillonnage, la concentration des matières dissoutes; les pourcentages de sable, de limon et d'argile; le type d'échantillonneur employé; et la granulométrie du sable, du limon et de l'argile, en pourcentage des particules est donnée lorsqu'elle est disponible.

3. Le tableau de la *granulométrie des échantillons ponctuels et intégrés des sédiments en suspension* (The table of Point Integrating Particle-size of Suspended Sediment) comprend: la date et l'heure de prélèvement de l'échantillon, la température de l'eau, le débit de la tranche de la section pour chaque verticale d'échantillonnage, la verticale d'échantillonnage, la profondeur de l'échantillon, la concentration des échantillons, en milligrammes par litre, la concentration des matières dissoutes, en milligrammes par litre, et granulométrie du sable, du limon et de l'argile.

4. The table of *Bed Load Particle-size* includes the following: Date and Time of the sample collection; Panel Discharge; Sampling Vertical and the Type of Sampler used in the collection of the sample and the Particle-size distribution, in percent, for each sample of bed load collected.

5. The table of *Bed Material Particle-size* includes the following: Date and Time of the sample collection; Panel Discharge; Sampling Vertical and the Type of Sampler used in the collection of the sample and the Particle-size distribution, in percent, for each sample of bed material collected.

6. The table of *Historical Sediment Data Summary* gives the following, for the period of record, where applicable.

   (a) Record Summary
   (b) Type of Sampling
   (c) Sampled Concentration, maximum and minimum
   (d) Suspended Sediment Load, maximum daily and the total, for the period, in tonnes
   (e) Summary, including mean load, the historical mean load and the standard error of the mean in percent.

(a) The *Record Summary* gives the months of record that data are available. If the complete month is on file the symbol (C) is shown, while partial months of data are indicated by the symbol (P). Months with no data on file are indicated by (-).

(b) The *Type of Sampling* indicates the type of sampling method used to collect the sediment samples during the period of operation. If the samples were collected by manual methods this is indicated by "MANUAL." If the samples were collected by a pump sampler or some other automatic method this is indicated by "AUTO." If both manual and automatic sampling methods were used this is indicated by "DUAL."

(c) The *Sampled Concentration* gives the maximum and minimum concentration, in milligrams per litre, and the date of collection for each year of record. The extreme recorded for the period of record is indicated by an asterisk (*). If more than one maximum or minimum, of the same value, occurred during the year only the date of the first occurrence is identified by the asterisk.

(d) The *Suspended Sediment Load* gives the maximum daily load, in tonnes, and the date of occurrence. The extreme recorded is indicated by an asterisk (*). The Total for the Period gives the total load for the period or year, in tonnes. The extreme recorded is also indicated by an asterisk (*). If more than one maximum or minimum, of the same value, occurred during the year only the date of the first occurrence is identified by the asterisk. A load which has been revised since the previous publication is marked with the symbol (R) for Revision.

4. Le tableau de la *granulométrie des sédiments charriés* (The table of Bed Load Particle-size) comprend: la date et l'heure de prélèvement de l'échantillon, le débit de la tranche de la section, la verticale d'échantillonnage et le type d'échantillonneur employé et le pourcentage des particules pour chaque échantillon recueilli du charriage.

5. Le tableau de la *granulométrie des matériaux du lit* (The table of Bed Material Particle-size) comprend: la date et l'heure de prélèvement de l'échantillon, le débit de la tranche de la section, la verticale d'échantillonnage et le type d'échantillonneur employé et le pourcentage des particules pour chaque échantillon recueilli.

6. Le tableau du *sommaire chronologique des données sur les sédiments* (The table of Historical Sediment Data Summary) donne, pour la période pour laquelle les données sont disponibles, les renseignements suivants lorsque de telles données existent:

   (a) Le sommaire du relevé
   (b) Le type d'échantillonnage
   (c) Les concentrations mesurées, maximum et minimum
   (d) Le débit des sédiments en suspension, maximum quotidien et le total pour la période en tonnes
   (e) Résumé, comprend le débit moyen, le débit moyen chronologique et l'erreur type de la moyenne en pourcentage.

(a) Le *sommaire du relevé* donne les mois de relevé pour lesquels les données sont disponibles. Le symbole (C) indique que les données sont disponibles pour tout le mois. Le symbole (P) indique que ces données ne sont disponibles que pour une partie du mois. Enfin, on indique par (-) les mois qui n'ont pas de données.

(b) Le *type d'échantillonnage* indique le type de méthode d'échantillonnage que l'on utilise dans le prélèvement des échantillons de sédiments pendant la période d'exploitation. Si le prélèvement des échantillons se fait par des méthodes manuelles, on indique «MANUEL». Si le prélèvement des échantillons se fait au moyen d'échantillonneur à pompe ou par quelque autre méthode automatique, on indique «AUTO». Si on utilise à la fois des méthodes d'échantillonnage manuelles et automatiques, on indique «DOUBLE».

(c) Pour les *concentrations mesurées* (Sampled Concentration), on donne la concentration maximale et la concentration minimale, en milligrammes par litre, et leur date d'obtention pour chaque année de relevé. La valeur extrême enregistrée est indiquée par un astérisque (*). Si la valeur du maximum ou du minimum a été mesurée plus d'une fois pendant l'année, on signale, par l'astérisque, seulement la date de la première mesure.

(d) Sous le *débit des sédiments en suspension* (Suspended Sediment Load), on donne le débit journalier maximal, en tonnes, et sa date de mesure. Le débit extrême enregistré est indiqué par un astérisque (*). Le débit total pour la période ou pour l'année est indiqué. La valeur extrême est également signalée par un astérisque (*). Si la valeur du maximum ou du minimum a été mesurée plus d'une fois pendant l'année, on signale, par l'astérisque, seulement la date de la première mesure. La lettre R indique qu'une valeur du débit a été révisée depuis la dernière publication.

(e) The *Summary* gives the *Mean Load* and the *Historical Mean Load* in tonnes.

The *Standard Error of the Mean* % is calculated using the following equations:

$$SEM = \frac{S}{\bar{x}\sqrt{n}} \times 100\%$$

and

$$S = \sqrt{\frac{\Sigma (x - \bar{x})^2}{n - 1}}$$

where SEM is the Standard Error of the Mean.

- S is the Standard Deviation of the annual mean loads.
- x is the annual Mean Load variable.
- $\bar{x}$ is the Historical Mean Load or the arithmetic mean of the annual Mean Loads.
- n is the number of years for which there is an annual Mean Load.

For stations with only instantaneous samples, this table will not include the *Suspended Sediment Load* or the statistical information in the *Summary*.

(e) Le *résumé* donne le *débit moyen* et le *débit moyen chronologique*, en tonnes.

L'*erreur-type de la moyenne* % (Standard Error of the Mean), est calculée à l'aide des équations suivantes:

$$SEM = \frac{S}{\bar{x}\sqrt{n}} \times 100\%$$

et

$$S = \sqrt{\frac{\Sigma (x - \bar{x})^2}{n - 1}}$$

où SEM est l'erreur type de la moyenne.

- S est l'écart type des débits moyens annuels.
- x est la variable du débit moyen annuel.
- $\bar{x}$ est le débit moyen chronologique ou la moyenne arithmétique des débits moyens annuels.
- n est le nombre d'années où il y a un débit moyen annuel.

Dans le cas des stations ne prélevant que des échantillons instantanés, ce tableau ne donnera pas le *débit des sédiments en suspension* ni les données statistiques du *résumé*.

CO-OPERATION AND ACKNOWLEDGMENTS

Co-operative undertakings with other agencies form an important part of the activities of the Water Survey of Canada. Close co-operation has been maintained with public agencies and private organizations concerned with water resources. Data have been mutually exchanged and suspended sediment collection operations have been facilitated by the assistance received from a number of organizations.

On waters adjacent to the International Boundary, certain sediment stations are maintained by Canada (or the United States) under agreement with the United States (or Canada) and the records are collected and compiled in a manner equally acceptable to both countries. These stations are designated as "International Gauging Stations" in this publication.

For the valuable assistance and co-operation received in obtaining sediment survey records, the Water Survey of Canada is indebted to other federal and provincial organizations which are noted as contributing agencies in the summary for the year. A list of these agencies may be found in the *Sediment Data Reference Index*.

COOPÉRATION ET REMERCIEMENTS

Le travail entrepris en coopération avec d'autres organismes représente une partie importante des activités de la Division des relevés hydrologiques du Canada. On a maintenu une étroite collaboration avec les organismes, publics ou privés, qui s'intéressent aux ressources en eau. On a échangé des données sur les sédiments, et l'assistance fournie par certains organismes a facilité les opérations d'échantillonnage des sédiments en suspension.

Dans les eaux adjacentes à la frontière internationale, les stations dépendent du Canada ou des États-Unis selon l'accord intervenu entre les deux pays, et les relevés sont faits et compilés de façon à satisfaire les deux pays. Ces stations sont nommées «Stations internationales de jaugeage» dans la présente publication.

La Division des relevés hydrologiques du Canada est redevable à plusieurs organismes fédéraux et provinciaux, dont les noms apparaissent dans le sommaire de l'année, de l'aide et de la collaboration qu'ils lui ont apportées pour l'obtention des données sur les sédiments. On trouvera également les noms des organismes qui ont fourni des données dans l'*Index de référence des données sur les sédiments*.

MICROFICHE

Sediment data are available in metric units on microfiche, upon request. The data are stored in station number order by province. There are 270 frames per microfiche at 48X reduction; there is a visible heading showing the fiche number, type of data, province, beginning and ending station number and year of data, and the month/year the fiche was created. The last frame is an index of the contents of that fiche.

MICROFICHE

Les données sur les sédiments sont disponibles sur microfiche en unités métriques. Ces données sont emmagasinées par ordre de numéro de station et par province. Chaque microfiche renferme 270 pages réduites de 48X. L'en-tête indique le numéro de la fiche, le genre de données, la province, le numéro de la première et de la dernière station, la première et la dernière année des données ainsi que le mois et l'année de création de la fiche. La dernière image donne l'index de la fiche.

DEFINITION OF TERMS

The following definitions are given to clarify the terms used in this publication:

Automatic pump sample is an individual water-sediment mixture pumped from a fixed point in a stream.

Bed load is that material moving in almost continuous contact with the streambed, being rolled or pushed along the bottom by the force of the water.

Bed material is the sediment mixture of which the streambed is composed.

Daily load is the suspended sediment load expressed in tonnes for a particular day. The daily load is obtained by multiplying the daily mean sediment concentration (mg/L) by the daily mean discharge (m^3/s) and the conversion factor, 0.0864.

Daily mean concentration is a time-weighted mean value and is computed from a manually constructed concentration curve. The mean concentration value may be determined arithmetically or graphically. The arithmetic mean is obtained either by (1) selecting values from the concentration graph that represents uniform intervals of time and taking the arithmetic average or by (2) selecting values from the graph that represent unequal intervals of time and weighing these values by the time intervals represented by the concentrations. For graphical explanation refer to *Office Procedures for Sediment Data Computations* and for the automated graphical explanation refer to *Automated Hydrometric Computation Procedures*.

Depth-integrated sediment sample is a suspended sediment sample collected at a single vertical in a cross section in a sampler moving vertically at a constant transit rate and represents an average sample for that part of the depth ranging from the water surface to about nine centimetres above the streambed.

Instantaneous suspended sediment sample is a sample collected at a fixed vertical in a river cross section.

Measured suspended sediment discharge is the suspended sediment discharge that can be computed from stream discharge and the concentration of sediment determined from depth-integrated sediment samples.

Particle-size analysis is the process of determining the size distribution of particles in a sediment sample.

Point-integrated sediment sample is a sample of the water-sediment mixture taken over a specified period of time at a fixed point and depth in a river cross section.

DÉFINITION DES TERMES

Les définitions suivantes sont présentées afin de faciliter la compréhension des termes utilisés dans la présente publication:

Échantillonnage automatique à l'aide d'une pompe (Automatic pump sample): Prélèvement d'un mélange de sédiments et d'eau au moyen d'une pompe fonctionnant automatiquement, en un point précis d'un cours d'eau.

Charriage (Bed load): Matières roulées ou poussées sur le fond sous l'action de l'eau, mais restant en contact presque permanent avec le fond.

Matériau du lit (Bed material): Mélange de sédiments composant le lit d'un cours d'eau.

Débit journalier des sédiments en suspension (Daily load): Débit des sédiments en suspension exprimé en tonnes par jour, pour une journée donnée. On l'obtient en multipliant la concentration journalière moyenne des sédiments (mg/L) par le débit journalier moyen de l'eau (m^3/s) et le facteur de conversion 0.0864.

Concentration journalière moyenne (Daily mean concentration): Moyenne pondérée en fonction du temps, calculée à partir d'une courbe de la concentration établie manuellement. La valeur de la concentration moyenne peut être déterminée arithmétiquement ou graphiquement. Pour la déterminer arithmétiquement, on peut, soit choisir sur la courbe des valeurs représentant des intervalles uniformes de temps et faire la moyenne arithmétique, soit choisir sur cette courbe des valeurs qui représentent des intervalles inégaux de temps et pondérer ces valeurs en fonction des intervalles de temps correspondants. En ce qui concerne les méthodes graphiques, consulter *Méthodes de bureau pour les calculs de données sur les sédiments* et, pour la méthode automatisée, *Automated Hydrometric Computation Procedures*.

Échantillon intégré sur toute la profondeur (Depth integrated sediment sample): Échantillon des sédiments en suspension prélevé sur une verticale précise d'une section transversale d'un cours d'eau à l'aide d'un échantillonneur se déplaçant verticalement à une vitesse constante; il représente un échantillon moyen des matières en suspension entre la surface de l'eau et environ 9 cm du fond.

Échantillon instantané de sédiments en suspension (Instantaneous suspended sediment sample): Échantillon prélevé à une verticale précise d'une section transversale d'un cours d'eau.

Débit mesuré des sédiments en suspension (Measured suspended sediment discharge): Débit des sédiments en suspension qui peut être calculé à partir du débit du cours d'eau et de la concentration des sédiments déterminée à partir d'échantillons intégrés sur toute la profondeur.

Analyse granulométrique (Particle-size analysis): Détermination de la répartition de la taille des particules dans un échantillon de sédiments.

Échantillon ponctuel et intégré (Point-integrated sediment sample): Échantillon constitué d'un mélange d'eau et de sédiments, prélevé au cours d'une période de temps donnée en un point précis d'une section transversale d'un cours d'eau et à une profondeur donnée.

Sediment is fragmental material which has deposited, eroded or transported by a flowing stream.

Sediment hydrograph is a graph showing the variation of suspended sediment concentration or sediment discharge with respect to time.

Single sample is a sample taken at a selected permanent vertical in a cross section. Two bottles of water-sediment mixture make up each single sample.

Single sampling vertical is a selected permanent vertical in a cross section in which single suspended sediment samples are collected.

Suspended sediment is sediment that moves in suspension in water either as a colloid or through the influence of the upward component of turbulent currents.

Suspended sediment concentration is the ratio of the weight of dry solids in a water-sediment mixture to the volume of the mixture. The units of this ratio are "milligrams per litre" (mg/L).

Suspended sediment load is the quantity of suspended sediment transported through a cross section per unit of time.

Total sediment load is the sum of the suspended sediment load and the bed load.

Unmeasured sediment load is the difference between total sediment load and measured suspended sediment load.

DEFINITION OF SYMBOLS

Symbols are located at the bottom of the data sets under the headings Time, Discharge, Concentration, and Dissolved Solids. The symbols with their definitions are listed below.

Time Symbol

E – Estimated – indicates estimated data. It indicates that the time of sample collection is estimated by some indirect method or comparison with other stream data.

Discharge Symbol(s)

A – Manual Gauge – indicates that one or more manual gauge observations per day were obtained and used as the mean for the day for a gauging station equipped with a recording gauge. This symbol is used during open-water periods only.

B – Ice Conditions – indicates the presence of ice at the gauging station. For gauging stations where discharge data are obtained, this symbol indicates that the presence of ice has affected the stage-discharge relationship.

E – Estimated – indicates estimated data. It indicates that the values recorded are estimated by some indirect method such as interpolation, extrapolation, comparison with other streams or by comparison with meteorological data.

Sédiments (Sediment): Matières fragmentaires qui ont été déposées, érodées ou transportées par un cours d'eau.

Hydrogramme des sédiments (Sediment hydrograph): Graphique représentant la variation de la concentration des sédiments en suspension ou du débit des sédiments en fonction du temps.

Échantillon unique (Single sample): Échantillon prélevé sur une verticale permanente particulière dans une section transversale. Deux bouteilles du mélange eau-sédiments constituent un seul échantillon.

Verticale d'échantillonnage unique (Single sampling vertical): Verticale permanente d'une section transversale où des échantillons uniques de sédiments en suspension sont prélevés.

Sédiments en suspension (Suspended sediment): Matériaux qui se déplacent au sein de l'eau, soit sous forme colloïdale, soit sous l'influence des forces ascendantes des courants turbulents.

Concentration des sédiments en suspension (Suspended sediment concentration): Rapport entre le poids des matières solides sèches contenues dans un mélange eau-sédiments et le volume du mélange. Les unités employées sont les «milligrammes par litre» (mg/L).

Débit des sédiments en suspension (Suspended sediment load): Quantité de sédiments en suspension transportés par unité de temps à travers une section transversale d'un cours d'eau.

Débit total des sédiments (Total sediment load): Somme du débit des sédiments en suspension et du débit charrié.

Débit non mesuré des sédiments (Unmeasured sediment load): Différence entre le débit total des sédiments et le débit mesuré des sédiments en suspension.

DÉFINITION DES SYMBOLES

Les symboles figurent au bas des séries de données et sont traités sous les rubriques Temps, Débit, Concentration, Matières solides en solution. Ces symboles avec leurs définitions sont donnés dans la liste ci-après.

Symbole du temps :

E – Estimative – Indique des données estimatives, c'est-à-dire que l'heure de prélèvement de l'échantillon est évaluée de façon indirecte ou par comparaison avec d'autres données sur les cours d'eau.

Symbole(s) du débit :

A – Turbidisonde simple – Indique qu'on a effectué à une station de jaugeage dotée d'une turbidisonde enregistreuse au moins une observation par jour à l'aide d'une turbidisonde simple et qu'on s'en est servi comme moyenne pour la journée en question. Le symbole n'est employé qu'au cours des périodes d'eau libre.

B – Glaces – Indique la présence de glaces à la station de jaugeage, qui ont faussé la relation hauteur-débit.

E – Estimative – Indique des données estimatives, c'est-à-dire que les valeurs enregistrées sont évaluées de façon indirecte, par exemple par interpolation, extrapolation, ou par comparaison avec d'autres cours d'eau ou avec des données météorologiques.

H – Daily Mean Discharge – is the mean discharge for a particular day, usually referred to as the "daily mean discharge".

V – Daily Mean; Manual Gauge – is the mean discharge for a particular day and indicates that one or more manual gauge observations per day were obtained and used as the mean for the day.

W – Daily Mean; Ice Conditions – is the mean discharge for a particular day and indicates that the presence of ice has affected the stage-discharge relationship.

Y – Daily Mean; Estimated – is the mean discharge for a particular day and indicates that the value has been estimated by some indirect method.

Concentration Symbol(s)

B – Split vertical sample Bottom portion only – indicates that the concentration represents a sample collected from the bottom portion of a split vertical sample.

C – Coarse Material Present – indicates that during the laboratory analysis coarse material (sand) was observed in the sediment sample.

F – Sample Bottle Filled – indicates that during the laboratory analysis it was observed that the sample bottle had been filled to capacity.

G – Organic Material Present – indicates that during the laboratory analysis it was observed that organic material was collected in the sample bottle.

T – Split vertical sample Top portion only – indicates that the concentration represents a sample collected from the top portion only of a split vertical sample.

Single Vertical Symbol(s)

M – Sediment measurement vertical – indicates that the sampling vertical is one of several, usually five, and represents a panel width. The instantaneous discharge represents the flow for a panel width.

X – Sampling vertical not at the regular single vertical – indicates that a sample was collected at a location, in a cross-section, which is not at the regular single vertical. The location of the regular single vertical is given at the bottom of the Instantaneous Suspended Sediment data.

Z – Sediment measurement vertical not at the regular measurement cross-section – indicated that a suspended sediment measurement was collected in a cross-section which is not the regular measurement corss-section.

Note: If no symbol is present the samples have then been collected at the regular Single Vertical.

H – Débit journalier moyen – Débit moyen pour une journée donnée, ordinairement appelé «débit journalier moyen».

V – Débit journalier moyen, turbidisonde simple – Débit moyen pour une journée donnée; indique qu'on a effectué au moins une observation par jour et qu'on s'en est servi comme moyenne pour la journée en question.

W – Débit journalier moyen, glaces – Débit moyen pour une journée donnée; indique que la présence de glaces a faussé la relation hauteur-débit.

Y – Débit journalier moyen, estimative – Débit moyen pour une journée donnée; indique que la valeur a été évaluée de façon indirecte.

Symbole(s) de la concentration :

B – Échantillon fractionné pris à la verticale, partie inférieure seulement – Indique que la concentration réfère à un échantillon prélevé dans la partie inférieure d'un échantillon fractionné pris à la verticale.

C – Sable grossier présent – Indique qu'au cours de l'analyse en laboratoire on a observé du sable grossier dans un échantillon de sédiments.

F – Flacon d'échantillonnage rempli – Indique qu'au cours de l'analyse en laboratoire on a observé que le flacon d'échantillonnage avait été complètement rempli.

G – Substance organique présente – Indique qu'au cours de l'analyse en laboratoire on a observé qu'une substance organique a été prélevée dans le flacon d'échantillonnage.

T – Échantillon fractionné pris à la verticale, partie supérieure seulement – Indique que la concentration réfère à un échantillon prélevé dans la partie supérieure seulement d'un échantillon fractionné pris à la verticale.

Symbole(s) de la verticale unique :

M – Verticale de mesure des sédiments – Indique que la verticale d'échantillonnage est l'une de plusieurs verticales, en général cinq, et qu'elle représente la dimension d'une tranche. Le débit instantané représente le débit relatif à la dimension d'une tranche.

X – Verticale d'échantillonnage à l'extérieur de la verticale unique habituelle – Indique qu'un échantillon a été prélevé à un endroit, dans une section transversale, mais à l'extérieur de la verticale unique habituelle. L'endroit de la verticale unique habituelle est donné à la fin des données sur les sédiments en suspension instantanés.

Z – Verticale de mesure des sédiments, à l'extérieur de la section transversale de mesure habituelle – Indique qu'une mesure de sédiments en suspension a été prise dans une section transversale à l'extérieur de la section transversale de mesure habituelle.

Note : S'il n'y a pas de symbole, cela indique que les échantillons ont été prélevés à la verticale unique habituelle.

EQUIVALENTS OF MEASURE

The following list of convenient equivalents of measure includes the relationship between imperial units and the International System of Units (SI).

1 inch equals 2.54 cm (centimetres)
1 foot equals 0.3048 m (metre)
1 statute mile equals 1.6093 km (kilometres)

1 cm (centimetre) equals 0.393 70 inch
1 m (metre) equals 3.2808 feet
1 km (kilometre) equals 0.621 37 mile

1 acre equals 43 560 square feet
1 acre equals 0.404 69 ha (hectare)
1 square mile equals 640 acres
1 square mile equals 2.5900 km^2 (square kilometres)
1 square mile equals 259.0 ha (hectares)

1 ha (hectare) equals 10 000 m^2 (square metres)
1 ha (hectare) equals 2.4710 acres
1 km^2 (square kilometre) equals 0.386 10 square mile

1 cubic foot equals 6.2288 imperial gallons
1 imperial gallon equals 4.546 09 L (litres)
1 imperial gallon equals 1.2010 U.S. gallons
1 U.S. gallon equals 0.133 68 cubic foot
1 cubic foot equals 0.028 317 m^3 (cubic metre)
1 m^3 (cubic metre) equals 35.315 cubic feet
1 dam^3 (cubic decametre) equals 1000 m^3 (cubic metres)
1 dam^3 (cubic decametre) equals 1 mm (millimetre) over 1 km^2 (square kilometre)

1 cubic foot per second for one day equals 1.9835 acre-feet
1 cubic foot per second for one day covers one square mile to a depth of 0.037 19 inch
1 acre-foot equals 1.2335 dam^3 (cubic decametres)
1 m^3/s (cubic metre per second) for one day equals 86.4 dam^3 (cubic decametre)
1 m^3/s (cubic metre per second) for one day covers one square kilometre to a depth of 0.0864 m (metre)

1 foot per second equals 0.6818 mile per hour
1 mile per hour equals 1.467 feet per second
1 m/s (metre per second) equals 3.6 km/h (kilometre per hour)
1 km/h (kilometre per hour) equals 0.2778 m/s (metre per second)

1 cubic foot per second equals 0.028 317 m^3/s (cubic metre per second)
1 m^3/s (cubic metre per second) equals 35.315 cubic feet per second

1 pound equals 0.453 59 kg (kilogram)
1 kg (kilogram) equals 2.2046 pounds

1 short ton (2000 pounds) equals 0.907 18 t (tonne)
1 t (tonne) equals 2204.6 pounds

degrees Celsius = 5/9 (degrees Fahrenheit - 32)
degrees Fahrenheit = 9/5 (degrees Celsius) + 32

ÉQUIVALENCES DES UNITÉS DE MESURE

Voici une liste des unités de mesure impériales et leurs équivalences dans le Système international d'unités (SI).

1 pouce vaut 2.54 cm (centimètres)
1 pied vaut 0.3048 m (mètre)
1 mille terrestre vaut 1.6093 km (kilomètre)

1 cm (centimètre) vaut 0.393 70 pouce
1 m (mètre) vaut 3.2808 pieds
1 km (kilomètre) vaut 0.621 37 mille

1 acre vaut 43 560 pieds carrés
1 acre vaut 0.404 69 ha (hectare)
1 mille carré vaut 640 acres
1 mille carré vaut 2.5900 km^2 (kilomètres carrés)
1 mille carré vaut 259.0 ha (hectares)

1 ha (hectare) vaut 10 000 m^2 (mètres carrés)
1 ha (hectare) vaut 2.4710 acres
1 km^2 (kilomètre carré) vaut 0.386 10 mille carré

1 pied cube vaut 6.2288 gallons impérials
1 gallon impérial vaut 4.546 09 L (litres)
1 gallon impérial vaut 1.2010 gallon américain
1 gallon américain vaut 0.133 68 pied cube
1 pied cube vaut 0.028 317 m^3 (mètre cube)
1 m^3 (mètre cube) vaut 35.315 pieds cubes
1 dam^3 (décamètre cube) vaut 1000 m^3 (mètres cubes)
1 dam^3 (décamètre cube) vaut 1 mm (millimètre) qui couvre 1 km^2 (kilomètre carré)

1 pied cube par seconde pendant un jour vaut 1.9835 acre-pied
1 pied cube par seconde pendant un jour couvre un volume d'un mille carré par 0.037 19 pouce
1 acre-pied vaut 1.2335 dam^3 (décamètre cube)
1 m^3/s (mètre cube par seconde) pour un jour vaut 86.4 dam^3 (décamètres cubes)
1 m^3/s (mètre cube par seconde) pour un jour couvre un kilomètre carré à une profondeur de 0.0864 m (mètre)

1 pied par seconde vaut 0.6818 mille par heure
1 mille par heure vaut 1.467 pied par seconde
1 m/s (mètre par seconde) vaut 3.6 km/h (kilomètres par heure)
1 km/h (kilomètre par heure) vaut 0.2778 m/s (mètre par seconde)

1 pied cube par seconde vaut 0.028 317 m^3/s (mètre cube par seconde)
1 m^3/s (mètre cube par seconde) vaut 35.315 pieds cubes par seconde

1 livre vaut 0.453 59 kg (kilogramme)
1 kg (kilogramme) vaut 2.2046 livres

1 tonne courte (2000 livres) vaut 0.907 18 t (tonne)
1 t (tonne) vaut 2204.6 livres

degrés Celsius = 5/9 (degrés Fahrenheit - 32)
degrés Fahrenheit = 9/5 (degrés Celsius) + 32

REVISIONS

A number of corrections or revisions have been made to previously published data. Many of these were required because of typographical or computational errors which were exposed when the data were stored on magnetic tape and monthly means were re-calculated by computer. Other errors were discovered or different interpretations of basic data were made during the systematic review of historical streamflow data presently underway.

Revisions to daily discharges or sediment data are not published at present. However, those stations where a systematic review has been conducted are identified in the Surface Water Data Reference Index publication. The Historical Streamflow Summary publications contain revisions to monthly and annual mean discharges, and annual extremes of discharge. Revisions, corrections or additions made to discharges and sediment after January 1, 1980, are indicated by an "R" symbol in the data summaries. Detailed information on revisions to historical data is available from the appropriate Regional Chief.

RÉVISIONS

On a corrigé ou révisé des données déjà publiées. Il a été nécessaire d'effectuer plusieurs corrections, car on a relevé des erreurs typographiques ou de calcul lorsqu'on a enregistré les données sur rubans magnétiques et qu'on a recalculé les moyennes mensuelles à l'aide d'un ordinateur. On a aussi relevé d'autres erreurs ou fait des interprétations différentes de certaines données de base au cours de la révision systématique des données historiques sur le débit, actuellement en cours.

Les corrections apportées aux débits journaliers ou aux données sur les sédiments ne sont pas publiées, du moins pour le moment. Cependant, les stations où on a effectué une révision systématique sont indiquées dans l'*Index de référence des données sur les eaux de surface*. Les publications intitulées *Sommaire chronologique de l'écoulement* contiennent des données révisées sur les débits mensuels et annuels moyens et les extrêmes annuels du débit. Les révisions, corrections ou ajouts apportés aux données sur les débits et sur les sédiments après le 1er janvier 1980 sont indiqués par la lettre R dans les résumés des données. On peut obtenir plus de détails sur les révisions en s'adressant au chef régional concerné.

ATHABASCA RIVER AT MCMURRAY - STATION NO. 07CC002

LOCATION LAT 56 44 00 N LONG 111 22 30 W
DRAINAGE AREA 99 700 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE MANUAL

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE VERTICAL SAMPLING (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 28	19 30	5.0	818	MID	D49	297	178														
APR 30	17 03	6.0	818	MID	D49	217															
MAY 02	11 00	7.0	772	MID	D49	231															
MAY 04	18 30	9.0	763	MID	D49	182	187														
MAY 06	18 00	10.0	743	MID	D49	157															
MAY 08	17 30	12.0	713	MID	D49	115															
MAY 10	19 30	13.0	782	MID	D49	191	171														
MAY 12	23 00	15.0	672	MID	D49	113															
MAY 14	19 00	18.0	881	MID	D49	138															
MAY 20	18 00	13.0	750	MID	D49	150															
MAY 22	19 00	17.0	739	MID	D49	247	181														
MAY 24	18 30	19.0	802	MID	D49	508															
MAY 26	21 15	21.0	829	MID	D49	301															
MAY 28	20 10	22.0	1050	MID	D49	1770	189	9	12	20	27	45	84	84	99	100			38	52	12
MAY 30	22 05	21.0	980	MID	D49	1240	241	12	17	28	45	85	81	89	98	100			18	64	17
JUN 02	17 45		1580	MID	D49	400															
JUN 06	19 10		1340	MID	D49	418															
JUN 10	20 45		1100	MID	D49	298															
JUN 16	20 00		988	MID	D49	183															
JUN 18	21 30		981	MID	D49	152	140														
JUN 22	18 45		1120	MID	D49	252 C															
JUN 24	20 00		937	MID	D49	158	150														
JUN 26	20 01		937	MID	D49	122	153														
JUN 30	11 45		1010	MID	D49	155															
JUL 02	19 30		915	MID	D49	105 C															
JUL 04	17 10		816	MID	D48	86															
JUL 05	20 30		819	MID	D49	90															
JUL 06	18 00		875	MID	D49	81															
JUL 08	18 31		886	MID	D49	73	149														
JUL 10	22 20		887	MID	D48	106	130														
JUL 12	21 30	18.0	875	MID	D49	88															
JUL 14	20 45	17.0	988	MID	D48	210 C															
JUL 16	14 30	17.0	1120	MID	D49	629 C															
JUL 18	18 00	18.0	1310	MID	D48	581 C	158														
JUL 20	19 00	18.0	1860	MID	D48	3580															
JUL 21	20 00	18.0	3330	MID	D48	3210															
JUL 22	21 00	18.0	4140	MID	D48	3580	180	17	20	32	40	54	84	75	95	100			38	44	20
JUL 23	18 00	14.0	4130	MID	D48	2940	180	18	25	37	44	55	85	78	94	100			34	41	25
JUL 24	15 30	18.0	3280	MID	D48	1540															
JUL 26	22 00	15.0	2880	MID	D48	597	188														
JUL 28	22 00	17.0	2840	MID	D48	457															
AUG 02	21 30	19.0	1490	MID	D48	384	183														
AUG 04	18 00	18.0	1370	MID	D48	237															
AUG 08	20 00	17.0	1120	MID	D48	112	175														
AUG 23	18 00	14.0	712	MID	D48	83	178														
AUG 26	20 30	14.0	858	MID	D48	88															
AUG 29	18 00	13.0	801	MID	D48	30															
SEP 02	17 00	14.0	884	MID	D48	31	171														
SEP 05	13 30	12.0	809	MID	D48	24															
SEP 10	18 30	11.0	819	MID	D48	20	208														
SEP 14	17 00	12.0	866	MID	D48	75	188														
SEP 18	18 30	11.0	861	MID	D48	70															
SEP 24	20 00	9.0	801	MID	D48	18	209														
SEP 28	19 30	10.0	484	MID	D48	30															
OCT 02	17 00	11.0	831	MID	D48	21	203														
OCT 06	14 00	10.0	840	MID	D48	17															
OCT 10	11 00	10.0	820	MID	D48	24	209														
OCT 14	17 00	08.0	788	MID	D48	17															
OCT 18	18 00	12.0	852	MID	D48	20	208														
OCT 22	22 00	07.0	857	MID	D48	43															

NOTE SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1973	PP-PCCCCCC--	MANUAL	4 040	JUN 17	*	14	FEB 28		---	---	---	---	---	---
1974	CCCCCCCCCC--	MANUAL	1 330	JUL 17		18	OCT 11		---	---	---	---	---	---
1975	P-PPCCCCCP--	MANUAL	1 800	JUL 02		7	MAR 15		---	---	---	---	---	---
1976	CCCCCCCCCC--	MANUAL	1 210	AUG 23		8	JAN 18		---	---	---	---	---	---
1977	---CCCCCCC--	MANUAL	1 820	JUN 03		20	OCT 24		---	---	---	---	---	---
1978	CCCCCCCCCCCC	MANUAL	1 600	JUN 20		5	FEB 03	*	---	---	---	---	---	---
1979	--CCCCCCCP-	MANUAL	1 820	JUN 18		5	MAR 15		---	---	---	---	---	---
1980	----PCCCC--	MANUAL	920	AUG 07		32	OCT 10		---	---	---	---	---	---
1981	----PCCCC---	MANUAL	599	JUN 07		15	SEP 15		---	---	---	---	---	---
1982	----PCCCC---	MANUAL	2 980	JUL 08		52	SEP 01		---	---	---	---	---	---
1983	----PCCCP---	MANUAL	45	JUN 07		6	SEP 05		---	---	---	---	---	---
1984	---PCCCC----	MANUAL	849	MAY 24		20	AUG 31		---	---	---	---	---	---
1985	----CCCCP---	MANUAL	827	JUL 08		45	JUN 15		---	---	---	---	---	---
1986	---PCCCCC--	MANUAL	3 580	JUL 22		17	OCT 08		---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ALBERTA

ATHABASCA RIVER NEAR WINDFALL - STATION NO. 07AE001

LOCATION LAT 54 12 25 N LONG 116 03 45 W
DRAINAGE AREA 19 600 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 08	11 40	4.0	199		WEBB	X	DIP	53	176														
JUN 05	11 00		952		MID	X	DH59	195	107														
JUL 07	17 30		524		MID	X	DH59	25	138														
JUL 30	18 50	15.0	589	M	MID	X	DH59	34	139														
AUG 27	10 00	17.0	309		MID	X	DH59	18	156														
NOV 04	12 00	1.0	148		MID	X	DH59	5	226														

NOTE SINGLE VERTICAL IS UNDETERMINED FOR 1986

DISCHARGE SYMBOL(S) M - DAILY MEAN
VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1974	·····PP···	MANUAL	31	AUG 28	6	SEP 25	---	---	---	---	---	---
1975	····PP··P···	MANUAL	69	JUN 17	6	SEP 25	---	---	---	---	---	---
1976	···PPP·PP···	MANUAL	236	JUN 22	10	SEP 22	---	---	---	---	---	---
1977	····PP···P···	MANUAL	195	JUN 22	30	SEP 28	---	---	---	---	---	---
1978	···PPPPPPP··	MANUAL	813	JUN 06	5	OCT 31	---	---	---	---	---	---
1979	····PPPPPP··	MANUAL	832	MAY 28	7	OCT 30	---	---	---	---	---	---
1980	···PPPPPPP··	MANUAL	1 610	JUN 08 *	11	OCT 15	---	---	---	---	---	---
1981	···PPPPPPP··	MANUAL	80	MAY 19	8	OCT 07	---	---	---	---	---	---
1982	·····PP·P···	MANUAL	894	JUL 07	34	SEP 28	---	---	---	---	---	---
1983	·····PPPP···	MANUAL	87	JUN 08	8	SEP 27	---	---	---	---	---	---
1984	····P·P·····	MANUAL	201	JUL 03	9	MAY 02	---	---	---	---	---	---
1985	····PPP·PP··	MANUAL	80	MAY 29	4	OCT 09 *	---	---	---	---	---	---
1986	····PPPP···P·	MANUAL	195	JUN 05	5	NOV 04	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

BATTLE RIVER NEAR THE SASKATCHEWAN BOUNDARY - STATION NO. 05PE004

LOCATION LAT 52 51 33 N LONG 110 01 05 W
DRAINAGE AREA 25 000 km²
TYPE OF FLOW REGULATED SINCE 1973
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 07	16 20	5.0	34.5		40.0		DH59	701	386	19	24	35	43	61	76	84	98	100			24	52	24
APR 14	15 20	5.0	25.1		40.0		DH59	304	346														
APR 30	18 10	8.0	12.5		40.0		DH59	88	383														
JUN 03	08 40	18.0	14.5		40.0		DH59	89	371														
JUL 03	14 40	22.0	5.47		MID	X	DH48	21	518														
AUG 07	15 00	20.0	16.7		40.0		DH59	571	381	78	86	90	93	95	98	97	100				4	10	86
SEP 10	11 20	12.0	5.86		MID	X	DH48	23	433														
OCT 08	09 00	8.0	5.73		40.0		DH48	23	474														
NOV 05	15 00	1.0	5.12		40.0		DH48	22	510														

NOTE SINGLE VERTICAL LOCATED AT 40.0 METRES FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

BATTLE RIVER NEAR THE SASKATCHEWAN BOUNDARY - STATION NO. 05FE004

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY HISTORICAL STANDARD ERROR OF MEAN %
1980	---PPPPPP-P-	MANUAL	714	APR 18	17	JUN 25	---	---	---	---	---	---
1981	---CCPPPP-P-	MANUAL	292	APR 08	7	JUL 29	867	APR 05 *	13 400 *	---	---	---
1982	---PPPPPP-P-	MANUAL	1 280	MAY 10 *	35	JUL 07	---	---	---	---	---	---
1983	---PPPPPP-P-	MANUAL	480	APR 13	7	NOV 01	---	---	---	---	---	---
1984	---PP-P-PP--	MANUAL	132	OCT 03	18	JUL 31	---	---	---	---	---	---
1985	---PPPPP-P--	MANUAL	1 180	APR 10	8	AUG 21 *	---	---	---	---	---	---
1986	---P-PPPPPP-	MANUAL	701	APR 07	21	JUL 03	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

BEAVER RIVER AT COLD LAKE RESERVE - STATION NO. 05AD005

LOCATION LAT 54 21 15 N LONG 110 13 00 W
DRAINAGE AREA 14 500 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT DISCHARGE (m³/s)	SINGLE VERTICAL SAMPLING (m)	TYPE OF SAMPLER	INSTANT CONCENT (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
JUN 03	17 30	20.0	18.5	WERB X DIP		43	171														

NOTE SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY HISTORICAL STANDARD ERROR OF MEAN %
1974	--------PP---	MANUAL	19	SEP 24	17	AUG 14	---	---	---	---	---	---
1975	---P--PPP---	MANUAL	389	APR 26 *	22	SEP 30	---	---	---	---	---	---
1976	---PPPPPP---	MANUAL	152	APR 13	10	MAY 19	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	108	APR 19	11	SEP 08	---	---	---	---	---	---
1978	---P-PPPPPP-	MANUAL	285	JUN 03	5	AUG 21	---	---	---	---	---	---
1979	----PPPPPP--	MANUAL	278	MAY 01	7	OCT 30	---	---	---	---	---	---
1980	---P-PPPP---	MANUAL	102	APR 22	11	JUL 16	---	---	---	---	---	---
1981	---PPPP-P---	MANUAL	43	APR 23	3	SEP 10 *	---	---	---	---	---	---
1982	----P--PP---	MANUAL	41	MAY 11	8	SEP 22	---	---	---	---	---	---
1983	---P---P-P--	MANUAL	42	APR 18	8	OCT 26	---	---	---	---	---	---
1984	---PP--P-P--	MANUAL	53	APR 07	5	OCT 02	---	---	---	---	---	---
1985	---P--P--P--	MANUAL	52	APR 24	4	JUL 30	---	---	---	---	---	---
1986	-----P------	MANUAL	43	JUN 03	43	JUN 03	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

BELLY RIVER NEAR GLENWOOD - STATION NO. 05AD041

LOCATION: LAT 49 21 08 N LONG 113 28 49 W
DRAINAGE AREA: 857 km²
TYPE OF FLOW: REGULATED SINCE 1935
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 04	13:50	2.0	11.1	22.0	X	DH59	140	174														
MAR 25	15:15	2.0	5.60	12.0	X	DIP	9	188														
APR 30	16:30	6.0	3.54	6.0	X	DIP	15	159														
MAY 13	11:40	7.0	6.11	12.0	X	DIP	18	159														
MAY 27	17:10	15.0	29.6	28.0	X	DH59	414	115														
JUN 03	14:40	14.0	38.4	26.0	X	DH59	155	104														
JUN 09	13:30	14.0	17.9	24.0	X	DH59	81	107														
JUN 25	13:15	20.0	1.07	9.0	X	DIP	23	131														
JUL 29	08:25	13.0	1.18	5.0	X	DIP	8	141														
AUG 26	16:20	21.0	0.945	4.5	X	DIP	4	142														
NOV 05	15:50	4.0	5.26	10.5	X	DIP	8	180														

NOTE: SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY: MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1985	----PPPPPP--	MANUAL	86	OCT 29		3	SEP 24	*	---	---	---	---	---	---
1986	--PPPPPP--P-	MANUAL	414	MAY 27	*	4	AUG 26		---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

BIRCH RIVER BELOW ALICE CREEK - STATION NO. 07KE001

LOCATION: LAT 58 18 40 N LONG 113 04 05 W
DRAINAGE AREA: 9 860 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 08	11:00	8.0	109	10RB	X	DIP	1920	188														
JUN 22	13:45	12.0	126	10RB	X	DIP	1770	243														
AUG 22	08:00	14.0	32.5	10RB	X	DIP	78	281														

NOTE: SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

BIRCH RIVER BELOW ALICE CREEK - STATION NO. 07KE001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1970	----PP------	MANUAL	135	MAY 14	28	JUN 22	---	---	---	---	---	---
1971	----P-PPP---	MANUAL	45	SEP 14	22	AUG 02	---	---	---	---	---	---
1972	----PPPP----	MANUAL	131	MAY 25	6	AUG 28	---	---	---	---	---	---
1973	----P-P---P--	MANUAL	1 430	JUL 12	37	OCT 18	---	---	---	---	---	---
1974	-----PPP-P--	MANUAL	244	AUG 20	46	OCT 04	---	---	---	---	---	---
1975	----PPPPP---	MANUAL	6 330	AUG 25 *	88	JUL 21	---	---	---	---	---	---
1976	---PP-PPP-P-	MANUAL	837	APR 19	14	NOV 03	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	385	APR 17	14	SEP 20	---	---	---	---	---	---
1978	---PPPPPP---	MANUAL	1 300	APR 29	20	JUL 26	---	---	---	---	---	---
1979	----PPPPPP--	MANUAL	835	MAY 19	20	JUL 27	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	255	APR 23	12	MAY 23	---	---	---	---	---	---
1981	----P-PP----	MANUAL	61	MAY 26	5	AUG 27 *	---	---	---	---	---	---
1982	----PP-PP---	MANUAL	423	MAY 24	18	JUN 24	---	---	---	---	---	---
1983	---P-P-PP---	MANUAL	458	APR 30	31	SEP 15	---	---	---	---	---	---
1984	----P----P--	MANUAL	180	MAY 25	57	OCT 03	---	---	---	---	---	---
1985	---P-P-P----	MANUAL	1 270	APR 28	6	AUG 21	---	---	---	---	---	---
1986	----PP-P----	MANUAL	1 820	MAY 08	78	AUG 22	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

BOW RIVER AT CALGARY - STATION NO. 05BH004

LOCATION: LAT 51 03 00 N LONG 114 03 00 W
DRAINAGE AREA: 7 860 km²
TYPE OF FLOW: REGULATED SINCE 1913
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 25	15:30	2.0	84.0		32.0		DH59	8	203														
APR 23	11:50	8.0	49.5		32.0		DH59	7	213														
JUN 02	08:50	11.0	408		32.0		DH59	88	182														
JUN 12	10:50	11.0	321		32.0		DH59	25	174														
JUL 16	15:15	15.0	137		32.0		DH59	4	185														
SEP 22	15:00	11.0	87.0		17.0	X	DH59	5	191														
OCT 22	15:00	8.0	78.0		16.0	X	DH59	2	204														
NOV 06	14:10	4.0	84.8	H	32.0		DH59	2	208														

NOTE - SINGLE VERTICAL LOCATED AT 32 METRES FOR 1986

DISCHARGE SYMBOL(S): H - DAILY MEAN
VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY JAN-DEC MEAN LOAD (TONNES)	SUMMARY JAN-DEC HISTORICAL MEAN LOAD (TONNES)	SUMMARY JAN-DEC STANDARD ERROR OF MEAN %
1972	---CCCCCCCCC	MANUAL	101	JUN 02	1	NOV 24	3 470	JUN 03	57 200	---	---	---
1973	CCCCCCCCCCCC	MANUAL	82	MAY 28	1	AUG 01	1 470	MAY 27	30 800	84.4	84.4	---
1974	CCCCCCCCCCCC	MANUAL	105	JUN 26 *	0	FEB 04 *	4 320	JUN 26 *	63 300 *	174	129	34.7
1975	CCCCCCCCCCCC	MANUAL	29	JUN 09	1	JAN 03	331	JUN 09	11 300	31.0	98.5	43.3
1976	CCCCCCCCCCCC	MANUAL	36	OCT 15	0	SEP 03	888	AUG 07	21 400	58.3	86.9	35.7
1977	CCCCCCCCCCCC	MANUAL	19	JUN 10	3	MAR 14	341	JUN 10	12 600	34.5	78.4	34.3
1978	CCCCCCCCCCCC	MANUAL	57	JUN 07	3	AUG 09	1 090	JUN 10	30 200	82.7	77.5	37.8
1979	P-PPP--------	MANUAL	20	APR 11	3	JAN 28	---	---	---	---	---	---
1981	----PP-P-P--	MANUAL	82	MAY 26	2	OCT 21	3 240	MAY 26	5 820	---	---	---
1982	---P-P-PP-P-	MANUAL	17	APR 28	1	SEP 02	---	---	---	---	---	---
1983	----PPPPP---	MANUAL	11	JUN 01	2	JUL 22	---	---	---	---	---	---
1984	----P-P-P---	MANUAL	11	JUL 03	3	MAY 01	---	---	---	---	---	---
1985	---PPPPPPP--	MANUAL	13	MAY 24	4	APR 12	---	---	---	---	---	---
1986	--PP-PP-PPP-	MANUAL	88	JUN 2	2	OCT 22	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ALBERTA

BOYER RIVER NEAR FORT VERMILION - STATION NO. 07JF002

LOCATION: LAT 58 26 42 N LONG 116 15 10 W
DRAINAGE AREA: 8 660 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 12	18:05	11.0	12.4	17.0	X	DH59	43	400														
MAY 27	16:25	20.0	7.77	18.0	X	DH59	14	426														
JUN 24	12:10	18.5	7.15	17.0	X	DH59	14	413														
JUL 31	11:30	20.0	1.52	7.0	X	DH48	8	874														
AUG 26	11:05	15.0	0.125	8.4	X	DH48	8	855														
SEP 23	17:15	10.0	0.005	MID	X	DIP	11	705														
OCT 29	11:35	2.0	0.244	MID	X	DIP	8	701														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1974	---------PP--	MANUAL	10	OCT 31		8	SEP 17		---	---	---	---	---	---
1975	---PPP-PPP--	MANUAL	182	MAY 01	*	8	AUG 07		---	---	---	---	---	---
1976	---PPPPPP----	MANUAL	136	APR 21		8	JUN 23		---	---	---	---	---	---
1977	---P-PP-PP---	MANUAL	49	APR 28		4	SEP 08	*	---	---	---	---	---	---
1978	----PPP---P---	MANUAL	45	MAY 08		18	OCT 04		---	---	---	---	---	---
1979	-------PPP-P-	MANUAL	31	JUL 26		4	AUG 18		---	---	---	---	---	---
1980	-----P-------	MANUAL	15	JUN 05		15	JUN 05		---	---	---	---	---	---
1981	-----PP-------	MANUAL	13	MAY 27		12	JUN 30		---	---	---	---	---	---
1982	-----P--------	MANUAL	95	MAY 04		23	MAY 20		---	---	---	---	---	---
1983	-----PP-------	MANUAL	38	MAY 05		11	JUN 02		---	---	---	---	---	---
1984	-----PPPPPP---	MANUAL	73	MAY 02		9	AUG 29		---	---	---	---	---	---
1985	-----PPPPPP---	MANUAL	20	OCT 30		5	JUL 23		---	---	---	---	---	---
1986	-----PPPPPP---	MANUAL	48	MAY 13		8	AUG 26		---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

CABIN CREEK NEAR SEEBE - STATION NO. 05BF019

LOCATION: LAT 50 57 33 N LONG 115 10 00 W
DRAINAGE AREA: 3.12 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 28	14:15	4.0	0.240	M	MID	X DIP	151 C	184														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

DISCHARGE SYMBOL(S): M - DAILY MEAN
CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

CABIN CREEK NEAR SEEBE - STATION NO. 05BF019

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	HISTORICAL STANDARD ERROR OF MEAN %
1969	CCCCCCCCCCCC	MANUAL	43	JUN 29	0	JUN 12 *	1.15	JUN 29	7.32	0.03	0.03	---
1970	CCCCCCCCCCCC	MANUAL	51	JUN 17	0	JUN 10	1.92	JUN 18	8.44	0.03	0.03	0.0
1971	CCCCCCCCCCCC	DUAL	222	JUN 06 *	0	JUL 07	9.19	JUN 06 *	25.6 *	0.10	0.05	46.9
1972	CCCCCCCCCCCC	DUAL	31	JUN 01	0	JUN 21	0.85	JUN 01	4.88	0.02	0.05	37.4
1973	CCCCCCCCCCCC	DUAL	20	JUN 05	0	FEB 20	0.28	JUN 05	1.88	0.01	0.04	38.9
1974	CCCCCCCCCCCC	DUAL	88	JUN 12	0	AUG 18	3.21	JUN 19	14.8	0.08	0.04	33.8
1975	CCCCCCCCCCCC	DUAL	22	MAY 22	0	JAN 08	0.07	MAY 22	1.10	0	0.04	32.5
1976	CCCCCCCCCCCC	DUAL	18	MAY 13	0	AUG 20	0.17	MAY 18	3.84	0.01	0.03	38.8
1977	CCCCCCCCCCCC	DUAL	10	MAY 10	0	JUN 10	0.13	MAY 24	1.18	0	0.03	36.2
1978	CCCCCCCCCCCC	DUAL	24	JUN 08	0	AUG 12	0.38	JUN 04	5.44	0.02	0.03	32.6
1979	P---PCCCCCP-	DUAL	53	AUG 15	0	JUN 13	0.32	MAY 25	2.80	---	---	---
1980	--CCCCCCC--	MANUAL	24	JUL 08	0	MAY 06	0.27	JUN 10	4.88	0.02	0.03	39.8
1981	----CCCCCC--	MANUAL	30	JUN 01	2	JUN 09	0.48	JUN 02	8.55	---	---	---
1982	-----CCCP---	MANUAL	48	SEP 11	1	JUN 23	0.45	JUN 10	8.88	---	---	---
1983	-----PCCCP---	MANUAL	36	MAY 13	1	JUN 01	0.13	JUL 03	2.79	---	---	---
1986	-----P-------	MANUAL	151	MAY 28	151	MAY 28	---	---	---	---	---	---

DUAL - MANUAL AND AUTOMATIC SAMPLING MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ALBERTA

CLEARWATER RIVER AT DRAPER - STATION NO. 07CD001

SUSPENDED SEDIMENT FOR 1986

LOCATION: LAT 56 41 07 N LONG 111 15 15 W
DRAINAGE AREA: 30 800 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 216 000 TONNES FOR THE PERIOD MAY 01 TO OCT 31

REMARKS

DAY	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	JUL DAILY DISCHARGE (m³/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	DAY
1	182	77	1 080	173	52	777	86.7	53	443	1
2	188	75	1 020	168	51	740	85.2	50 S	411	2
3	183	85	1 200	163	44 S	620	83.3	37	288	3
4	176	107	1 630	157	36	488	83.4	30 S	242	4
5	181	126	2 080	153	31	410	101	48	426	5
6	188	140	2 400	150	26 S	337	120	75 S	778	6
7	198	149	2 550	146	22	278	141	85 S	1 040	7
8	200	150	2 590	142	20 S	245	154	77 S	1 020	8
9	201	149	2 590	139	18	228	161	72 S	1 000	9
10	199	148	2 540	135	18	210	163	89 S	872	10
11	198	143 S	2 450	132	17	194	164	83 S	883	11
12	198	137	2 340	130 A	16 S	180	164	83	893	12
13	199	130 S	2 240	127 A	17	187	164	74 S	1 050	13
14	198	121	2 080	124 A	20	214	164	151	2 140	14
15	198	110 S	1 880	123 A	21 S	223	165	247 S	3 520	15
16	191	89	1 630	122 A	21	221	185	334	4 780	16
17	188	85 E	1 370	121 E	21 S	220	188	388	5 580	17
18	181	72	1 130	118 A	22	226	188	422	6 890	18
19	178	65	1 000	110	23	219	223	507 S	9 770	19
20	178	59	887	109	25	235	280	733 S	18 800	20
21	174	57 S	857	108	28 S	261	285	529 S	13 000	21
22	174	56	842	107	29	268	297	356	8 670	22
23	178	80	828	107	32 S	298	301	305 S	9 330	23
24	184	88	1 050	109	36 S	338	298	175	4 480	24
25	186	88	1 090	108	37	345	297	158	4 000	25
26	191	71 S	1 170	108	41	383	298	139	3 580	26
27	192	74	1 230	106	45	412	282	126	3 130	27
28	190	74 S	1 210	103	45	436	288	118	2 940	28
29	186	64	1 030	101	50	436	288	104 S	2 690	29
30	180	55 S	855	99.0	52 S	445	280	130 S	3 280	30
31	178	52 S	781				280	175	4 380	31
TOTAL	5 760		47 730	3 799.0		10 073	5 263.6		111 838	TOTAL

DAY	AUG DAILY DISCHARGE (m³/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m³/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m³/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	DAY
1	286	133	3 290	118	28	285	87.8	34	258	1
2	278	86	2 070	117	28	283	88.0	34	259	2
3	270	68 S	1 580	116	29	291	88.2	34	259	3
4	262	63	1 430	114	29	286	86.2	32	238	4
5	256	62	1 370	112	29	281	85.2	31	228	5
6	248	61 S	1 310	111	30	288	87.3	34	256	6
7	240	61	1 260	108	30 S	283	90.0	43	334	7
8	229	61	1 210	108	30	280	90.4	49	383	8
9	223	61 S	1 180	107	31	287	92.4	56	447	9
10	215	61	1 130	108	34	311	91.6	62	491	10
11	207	60	1 070	104	41	388	90.8	69	541	11
12	198	59	1 010	101	45	393	92.0	74 S	588	12
13	191	55	908	88.7	45 S	384	91.3	73 S	576	13
14	183	47 S	743	88.0	42	356	90.7	72	564	14
15	177	26 S	398	87.0	36	302	90.5	72	563	15
16	172	8	118	86.8	32	268	90.2	72	581	16
17	165	7	99.8	84.8	27 S	221	88.2	72	549	17
18	161	11	153	83.8	24	185	86.7	72	539	18
19	158	16	218	84.0	25	203	86.5	71	531	19
20	156	22 S	295	82.8	25	201	86.3	71	529	20
21	153	33	304	82.9	28 S	209	86.7	69	517	21
22	150	24	311	83.1	28	225	87.3	68	498	22
23	147	24	305	81.5	28	221	86.8	64	480	23
24	143	24	297	80.8	28	217	85.8	63	467	24
25	140	24	290	80.7	29	226	85.8	63	468	25
26	136	24	282	88.8	28	215	88.0	66	490	26
27	133	25	287	87.0	29	218	87.1	71	534	27
28	130	25	282	87.1	30	226	87.2	78 S	588	28
29	127	25	285	87.1	32 S	241	88.2 B	82	611	29
30	124	25	278	87.9	35	266	88.7 B	84	622	30
31	121	26	272				85.0 B	82	602	31
TOTAL	5 779		24 057.8	2 883.8		8 028	2 730.0		14 571	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

CLEARWATER RIVER AT DRAPER - STATION NO. 07CD001

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1988

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 11	19:30	9.0	198	MID	DH59	143		139														
MAY 13	17:50	10.0	199	MID	DH59	126																
MAY 15	21:30	9.0	194	MID	DH59	107		143														
MAY 17	21:00	10.0	184	MID	DH59	78																
MAY 21	21:30	14.0	174	MID	DH59	56																
MAY 25	06:30	15.0	183	MID	DH59	70																
MAY 28	08:15	17.0	180	MID	DH59	78		187														
MAY 30	12:30	18.0	180	MID	DH59	55																
MAY 31	15:30	19.0	174	MID	DH59	52																
JUN 03	06:45	18.0	184	MID	DH59	46		176														
JUN 06	06:55	15.0	148	MID	DH59	28																
JUN 08	20:15	19.0	141	MID	DH59	148	C															
JUN 12	06:55	21.0	130	MID	DH59	16		151														
JUN 15	15:00	16.0	123	MID	DH59	21																
JUN 17	16:00	18.0	120	MID	DH59	199	C															
JUN 21	13:15	18.0	108	MID	DH59	2010		187	2	2	5	7	18	36	61	89	99	100		64	34	2
JUN 23	20:15	18.0	108	MID	DH59	1010	C															
JUN 24	12:10	20.0	109	MID	DH59	36		159														
JUN 30	23:28	22.0	84.1	MID	DH59	127	C															
JUL 02	17:30	23.0	84.8	MID	DH59	48	C															
JUL 04	14:30	18.0	93.4	MID	DH59	29		159														
JUL 06	15:30	17.0	124	MID	DH59	80																
JUL 07	18:58	18.0	145	MID	DH59	84																
JUL 08	17:50	20.0	157	MID	DH59	75		157														
JUL 09	20:00	18.0	162	MID	DH59	71																
JUL 10	20:15	19.0	184	MID	DH59	88																
JUL 11	20:00	20.0	184	MID	DH59	31																
JUL 13	18:00	22.0	184	MID	DH59	73																
JUL 15	20:30	20.0	184	MID	DH59	280	C															
JUL 19	19:30	22.0	228	MID	DH59	524		147														
JUL 20	14:00	18.0	283	MID	DH59	788		152	5	8	12	19	26	34	44	88	100			86	25	9
JUL 21	17:40	20.0	288	MID	DH59	338		129														
JUL 21	17:41	20.0	288	MID	DH59	428		126														
JUL 23	20:00	18.0	301	MID	DH59	189	C	124														
JUL 28	18:15	20.0	288	MID	DH59	87																
JUL 30	18:45	20.0	281	MID	DH59	151	C															
AUG 03	15:00	20.0	288	MID	DH59	82		121														
AUG 03	15:01	20.0	288	MID	DH59	70		121														
AUG 06	20:00	21.0	248	MID	DH59	81																
AUG 09	18:00	20.0	221	MID	DH59	123																
AUG 14	20:30	18.0	180	MID	DH59	41																
AUG 15	20:28	21.0	175	MID	DH59	17		128														
AUG 20	18:00	21.0	154	MID	DH59	22																
AUG 20	19:01	21.0	154	MID	DH59	23																
SEP 07	16:40	16.0	109	MID	DH59	30		168														
SEP 13	19:04	11.0	87.2	MID	DH59	45																
SEP 17	19:52	8.0	84.7	MID	DH59	25		178														
SEP 21	12:11	11.0	83.7	MID	DH59	27																
SEP 28	18:50	10.0	87.3	MID	DH59	34		180														
OCT 12	16:08	5.0	82.2	MID	DH59	137		172														
OCT 12	18:08	5.0	82.2	MID	DH59	74		178														
OCT 13	16:48	5.0	80.8	MID	DH59	13																
OCT 28	17:30	2.0	87.3	MID	DH59	80		187														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1987	----PP-PPP-P	MANUAL	330	MAY 12	6	DEC 12	---	---	---	---	---	---
1988	PPPPPPPPPP-P	MANUAL	369	JUL 04	3	MAR 21 *	---	---	---	---	---	---
1989	CCCCCCCCCCCC	MANUAL	2 030	APR 21	3	AUG 25	78 500	APR 21	810 000	2 470	2 470	---
1970	CCCCCCCCCCCC	MANUAL	2 380	JUL 02 *	5	JAN 28	137 000	JUL 02 *	1 830 000 *	5 580	4 530	45.4
1971	CCCCCCCCCCCC	MANUAL	1 580	APR 24	8	JAN 29	85 000	APR 24	887 000	2 780	3 940	33.5
1972	CCCCCCCCCCCC	MANUAL	841	MAY 04	5	AUG 21	47 200	MAY 04	485 000	1 980	3 450	30.7
1973	CCCCCCCC---	MANUAL	1 710	AUG 07	5	FEB 28	80 400	AUG 07	890 000	---	---	---
1974	----CCCCCC--	MANUAL	786	MAY 11	80	SEP 11	78 500	MAY 01	1 240 000	---	---	---
1975	P-P-PCCCCC--	MANUAL	1 020	JUL 17	7	MAR 18	35 500	JUL 18	1 020 000	---	---	---
1976	PPCCCCCCCC--	MANUAL	1 260	AUG 28	10	MAR 03	35 200	AUG 28	717 000	2 920	3 340	24.7
1977	---CCCCCC--	MANUAL	852	MAY 20	15	OCT 26	17 800	MAY 31	455 000	---	---	---
1978	CCCCCCCCCCCC	MANUAL	884	APR 30	5	DEC 04	17 700	APR 30	527 000	2 120	3 140	22.4
1979	CCCCCCCCC--	MANUAL	1 000	MAY 17	7	JAN 08	48 800	MAY 17	873 000	3 550	3 200	18.7
1980	---CCCCCC--	MANUAL	1 050	AUG 05	11	JUL 29	25 300	AUG 18	553 000	---	---	---
1981	----PCCCC---	MANUAL	118	AUG 08	7	SEP 01	1 320	JUL 17	34 500	---	---	---
1982	-----CCCC---	MANUAL	47	AUG 15	5	JUL 20	711	JUN 01	30 900	---	---	---
1983	---PPCCCP---	MANUAL	123	APR 28	18	JUN 22	2 010	APR 29	82 500	---	---	---
1985	----CCCCC---	MANUAL	1 150	MAY 08	28	JUL 03	52 200	MAY 06	505 000	---	---	---
1986	----CCCCCC--	MANUAL	2 010	JUN 21	13	OCT 13	18 500	JUL 20	218 000	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ALBERTA

CROWSNEST RIVER AT FRANK - STATION NO. 05AA008

LOCATION LAT 49 35 49 N LONG 114 24 33 W
DRAINAGE AREA 402 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 26	11 30	3.0	3.30	3.0 X	DH48	3	249														
APR 23	14 35	1.0	14.5	20.0 X	DH48	58	181														
MAY 28	16 45	12.0	33.1	13.0 X	D48	255 C	188														
JUN 04	10 15	9.0	21.2	4.0 X	DH48	32	177														
JUN 10	16 10	10.0	14.8	16.0 X	DH48	17 C	178														
JUN 25	11 00	12.0	8.25	2.0 X	DH59	8	211														
AUG 13	08 30	10.0	2.92	13.0 X	DH48	4	243														
SEP 03	14 45	10.0	2.24	14.0 X	DH48	31	213														
SEP 30	15 45	5.0	2.80	5.0 X	DH48	4	236														
NOV 04	15 40	4.0	2.85	5.0 X	DH48	3	253														

NOTE - SINGLE VERTICAL IS UNDETERMINED FOR 1985

CONCENTRATION SYMBOL(S) C - COARSE MATERIAL PRESENT

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)			TOTAL FOR PERIOD (TONNES)	SUMMARY - MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1972	----PP------	MANUAL	802	MAY 31	*	42	JUN 09		---	---		---	---	---	---
1974	------P-PP--	MANUAL	8	JUL 23		3	OCT 02		---	---		---	---	---	---
1975	----PPPPPPP-	MANUAL	884	JUN 20		2	SEP 02		---	---		---	---	---	---
1976	---CCCCCCCP-	MANUAL	197	AUG 08		3	OCT 05		271	AUG 08		3 780	---	---	---
1977	--CCCCCCCCCC	MANUAL	34	JUN 08		6	APR 13		13.7	JUN 08		714	2.75	2.75	---
1978	CCCCCCCCCCC	MANUAL	74	JUN 05		2	OCT 31		187	JUN 08		2 610	10.4	8.58	58.1
1979	CCCCCCCCCC--	MANUAL	183	MAY 25		0	FEB 13	*	525	MAY 27	*	3 820	* 15.5	9.55	38.8
1980	--CCCCCCC--	MANUAL	88	APR 30		4	AUG 17		181	APR 30		2 080	8.50	9.29	28.3
1981	----PP-PPP--	MANUAL	81	MAY 01		8	SEP 03		---	---		---	---	---	---
1982	---PPPP-P---	MANUAL	28	APR 15		3	SEP 15		---	---		---	---	---	---
1983	--PPPPP-P-P-	MANUAL	88	MAR 30		3	SEP 01		---	---		---	---	---	---
1984	---PPPPPP---	MANUAL	35	APR 04		4	AUG 21		---	---		---	---	---	---
1985	---PPPPPPP--	MANUAL	24	APR 29		3	AUG 29		---	---		---	---	---	---
1986	--PPPP-PP-P-	MANUAL	255	MAY 28		3	MAR 26		---	---		---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

DEERLICK CREEK NEAR HINTON - STATION NO. 07AF004

SUSPENDED SEDIMENT FOR 1986

LOCATION: LAT 53 09 20 N LONG 117 14 36 W
DRAINAGE AREA: 14.0 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 218 TONNES FOR THE PERIOD JUN 01 TO OCT 31

REMARKS:

	JUN			JUL			AUG			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	0.307	2	0.05	0.157	9	0.12	0.330	2	0.08	1
2	0.249	2	0.04	0.115	1	0.01	0.291	3	0.08	2
3	0.209	3	0.05	0.101	2	0.02	0.260	2	0.04	3
4	0.193	2	0.03	0.097	9	0.08	0.230	1	0.02	4
5	0.189	2	0.03	0.239	11	0.23	0.222	0	0	5
6	0.211	4	0.07	0.277	8	0.18	0.188	2	0.03	6
7	0.207	0	0	0.327	6	0.23	0.184	1	0.01	7
8	0.183	0	0	0.420	7	0.28	0.139	1	0.01	8
9	0.182	2	0.03	0.544	13	0.61	0.127	1	0.01	9
10	0.156	0	0	0.471	6	0.24	0.114	0	0	10
11	0.233	1	0.02	0.378	3	0.10	0.209	5	0.11	11
12	0.184 A	4 S	0.07	0.347	2	0.06	0.213	8	0.15	12
13	0.167 A	4 S	0.06	0.307	1	0.03	0.142	5	0.07	13
14	0.156 A	2 S	0.03	0.283	5	0.14	0.113	3	0.03	14
15	0.212	3	0.05	0.397	9	0.31	0.098	4	0.03	15
16	0.181	2	0.03	1.85	247	35.2	0.089	1	0.01	16
17	0.174	1	0.02	4.00	275	95.0	0.083	1	0.01	17
18	0.166	1	0.01	3.99	155	53.4	0.078	3	0.02	18
19	0.211	4	0.07	2.03	46	8.42	0.101	3	0.03	19
20	0.183	4	0.06	1.37	27	3.20	0.088	2	0.01	20
21	0.153	2	0.03	1.02	18	1.61	0.074	0	0	21
22	0.138	3	0.04	0.899	13	1.01	0.070	0	0	22
23	0.126	3	0.03	1.06	19	1.74	0.084	0	0	23
24	0.113	1	0.01	0.837	15	1.08	0.085	0	0	24
25	0.102	1	0.01	0.639	9	0.50	0.077	0	0	25
26	0.094	0	0	0.802	8	0.31	0.069	0	0	26
27	0.091	0	0	0.495	5	0.26	0.056	0	0	27
28	0.087	1	0.01	0.485	10	0.42	0.052	0	0	28
29	0.108	5	0.05	0.549	14	0.78	0.051	0	0	29
30	0.155	7	0.09	0.467	3	0.12	0.050	0	0	30
31				0.378	4	0.13	0.047	0	0	31
TOTAL	5.129		0.89	25.011		205.81	3.942		0.73	TOTAL

	SEP			OCT						
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	0.045	0	0	0.654	12	0.68				1
2	0.045	1	0	0.537	5	0.23				2
3	0.089	3	0.02	0.457	2	0.08				3
4	0.280	28	0.70	0.716	7	0.43				4
5	0.280	26	0.58	0.824	9	0.72				5
6	0.138	8	0.10	0.881	9	0.75				6
7	0.108	0	0	0.820	5	0.43				7
8	0.098	0	0	0.823	4	0.28				8
9	0.089	0	0	0.650	3	0.17				9
10	0.142	3	0.04	0.570	3	0.15				10
11	0.254	8	0.18	0.503	2	0.09				11
12	0.184	5	0.08	0.445	2	0.08				12
13	0.164	4	0.05	0.395	2	0.07				13
14	0.129	1	0.01	0.356	2	0.06				14
15	0.114	0	0	0.324	2	0.06				15
16	0.104	0	0	0.292	2	0.05				16
17	0.095	0	0	0.260	2	0.04				17
18	0.083	0	0	0.232	1	0.02				18
19	0.073	0	0	0.211	1	0.02				19
20	0.083	0	0	0.192	1	0.02				20
21	0.055	0	0	0.178	1	0.02				21
22	0.053	2	0.01	0.165	1	0.01				22
23	0.053	2	0.01	0.156	1	0.01				23
24	0.046	1	0	0.147	1	0.01				24
25	0.137	7	0.08	0.141	1	0.01				25
26	0.486	22	0.89	0.135	1	0.01				26
27	0.362	7	0.21	0.150	2	0.03				27
28	0.309	1	0.03	0.137	1	0.01				28
29	0.388	3	0.10	0.124	1	0.01				29
30	0.803	10	0.62	0.114	1	0.01				30
31				0.113 B	1	0.01				31
TOTAL	4.978		3.61	11.883		4.57				TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS S - SAMPLE(S) COLLECTED THIS DAY

ALBERTA

DEERLICK CREEK NEAR HINTON - STATION NO. 07AF004

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE VERTICAL SAMPLING (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY	10 08 30		0.442	MID	DIP	6															
MAY	11 08 35		0.271	MID	DIP	3															
MAY	12 10 00		0.330	MID	DIP	4															
MAY	15 11 30		0.243	MID	DIP	7															
MAY	16 08 40		0.258	MID	DIP	2															
MAY	17 10 03		0.205	MID	DIP	6															
MAY	18 10 15		0.491	MID	DIP	6															
MAY	19 08 55		0.383	MID	DIP	1															
MAY	20 12 00E		0.392	MID	DIP	2															
MAY	21 10 15		0.414	MID	DIP	1															
MAY	22 08 15		0.382	MID	DIP	4															
MAY	23 09 40		0.503	MID	DIP	11															
MAY	24 10 20		0.559	MID	DIP	6															
MAY	25 10 05		0.503	MID	DIP	6															
MAY	26 10 15		0.498	MID	DIP	2															
MAY	28 11 00		0.438	MID	DIP	5															
MAY	29 11 00		0.423	MID	DIP	6															
MAY	29 15 58	10.0	0.445	2.4 X	DH48	8	114														
MAY	30 08 40		0.391	MID	DIP	2															
MAY	31 10 25		0.377	MID	DIP	5															
JUN	01 11 30		0.280	MID	DIP	1															
JUN	02 12 50		0.262	MID	DIP	2															
JUN	03 08 27		0.213	MID	DIP	3															
JUN	04 08 45		0.277	MID	DIP	2															
JUN	05 10 18		0.201	MID	DIP	1															
JUN	06 08 30		0.251	MID	DIP	5															
JUN	07 09 50		0.202	MID	DIP	0															
JUN	08 09 35		0.195	MID	DIP	0															
JUN	09 11 05		0.188	MID	DIP	2															
JUN	10 08 30		0.185	MID	DIP	0															
JUN	11 11 12		0.223	MID	DIP	1															
JUN	12 10 28		0.215	MID	DIP	4															
JUN	13 09 25		0.167	MID	DIP	4															
JUN	14 10 40		0.174	MID	DIP	2															
JUN	15 10 10		0.237	MID	DIP	4															
JUN	16 11 16		0.147	MID	DIP	2															
JUN	17 09 30		0.183	MID	DIP	1															
JUN	18 08 00		0.174	MID	DIP	1															
JUN	19 10 34		0.214	MID	DIP	3															
JUN	20 09 30		0.183	MID	DIP	4															
JUN	21 11 45		0.131	MID	DIP	2															
JUN	22 12 05		0.127	MID	DIP	3															
JUN	24 10 30		0.128	MID	DIP	1															
JUN	25 11 35		0.108	MID	DIP	1															
JUN	26 11 28		0.089	MID	DIP	8															
JUN	27 10 10		0.088	MID	DIP	0															
JUN	28 11 00		0.093	MID	DIP	1															
JUN	29 09 55		0.089	MID	DIP	2															
JUN	30 09 55		0.169	MID	DIP	5															
JUL	01 11 55		0.188	MID	DIP	10															
JUL	02 09 50		0.158	MID	DIP	1															
JUL	03 11 40		0.184	MID	DIP	2															
JUL	04 11 40		0.188	MID	DIP	8															
JUL	05 11 30		0.260	MID	DIP	11															
JUL	06 11 55		0.269	MID	DIP	7															
JUL	07 10 00		0.347	MID	DIP	7															
JUL	08 11 20		0.287	MID	DIP	2															
JUL	08 09 25		0.485	MID	DIP	9															
JUL	09 10 30		0.833	MID	DIP	19															
JUL	10 08 05		0.485	MID	DIP	6															
JUL	11 08 04		0.405	MID	DIP	3															
JUL	12 11 12		0.325	MID	DIP	2															
JUL	13 09 40		0.313	MID	DIP	1															
JUL	14 13 25		0.330	MID	DIP	7															
JUL	15 10 05		0.604	MID	DIP	9															
JUL	15 12 21	9.0	0.431	1.4 X	DH48	13	111														
JUL	16 15 15		2.08	MID	DIP	305															
JUL	17 09 35		3.12	MID	DIP	182															
JUL	18 10 30		4.71	MID	DIP	141															
JUL	19 10 14		2.07	MID	DIP	50															
JUL	20 11 42		1.37	MID	DIP	28															
JUL	21 08 45		0.955	MID	DIP	18															
JUL	22 13 59		0.726	MID	DIP	12															
JUL	23 11 00		1.01	MID	DIP	17															
JUL	24 11 10		0.886	MID	DIP	14															
JUL	25 10 25		0.682	MID	DIP	11															
JUL	26 10 30		0.506	MID	DIP	5															
JUL	27 10 20		0.481	MID	DIP	5															
JUL	28 10 30		0.423	MID	DIP	7															
JUL	29 11 20		0.713	MID	DIP	14															
JUL	30 10 30		0.467	MID	DIP	1															
JUL	31 10 30		0.381	MID	DIP	2															
JUL	31 12 37	7.0	0.388	4.8 X	DH48	6	113														
AUG	01 15 10		0.320	MID	DIP	2															
AUG	02 08 30		0.298	MID	DIP	4															
AUG	03 09 25		0.267	MID	DIP	3															
AUG	04 10 05		0.243	MID	DIP	1															
AUG	05 10 20		0.238	MID	DIP	0															
AUG	06 10 10		0.228	MID	DIP	2															
AUG	07 09 30		0.184	MID	DIP	2															
AUG	08 11 25		0.188	MID	DIP	1															
AUG	09 08 55		0.150	MID	DIP	2															
AUG	10 10 25		0.138	MID	DIP	0															
AUG	11 08 45		0.131	MID	DIP	3															
AUG	12 08 25		0.233	MID	DIP	7															
AUG	13 08 55		0.182	MID	DIP	8															
AUG	14 10 15		0.145	MID	DIP	2															
AUG	15 10 10		0.122	MID	DIP	8															
AUG	16 10 30		0.127	MID	DIP	1															
AUG	17 10 35		0.118	MID	DIP	1															
AUG	18 12 45		0.096	MID	DIP	3															
AUG	19 11 50		0.147	MID	DIP	3															

NOTE SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

TIME SYMBOL E - ESTIMATED
VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

CONTINUED

DEERLICK CREEK NEAR HINTON - STATION NO. 07AF004 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
AUG 20	10:30		0.108	MID		DIP	2															
AUG 21	10:25		0.086	MID		DIP	0															
AUG 22	10:30		0.088	MID		DIP	0															
AUG 23	10:30		0.080	MID		DIP	0															
AUG 24	09:30		0.077	MID		DIP	1															
AUG 25	11:55		0.085	MID		DIP	0															
AUG 26	12:20		0.078	MID		DIP	0															
AUG 27	13:10		0.073	MID		DIP	0															
AUG 28	11:00		0.082	MID		DIP	0															
SEP 04	12:10		0.309	MID		DIP	30															
SEP 08	09:25		0.111	MID		DIP	0															
SEP 11	12:25		0.230	MID		DIP	2															
SEP 11	15:20	8.0	0.218	10RB	X	DIP	5	130														
SEP 15	09:25		0.115	MID		DIP	0															
SEP 22	10:45		0.054	MID		DIP	1															
SEP 29	11:35		0.323	MID		DIP	1															
OCT 06	10:30		0.852	MID		DIP	10															

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY APR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1987	-----CCCCC--	MANUAL	13 JUN 16		0 JUN 05	*	13.3 JUN 09		31.9	---	---	---
1988	-----CCCCC--	MANUAL	20 JUL 24		3 JUN 26		5.86 JUL 22		37.4	---	---	---
1989	-----CCCCC--	MANUAL	757 AUG 05		2 AUG 27		126 JUL 05		246	---	---	---
1970	-----CCCCCC--	MANUAL	34 JUN 17		0 AUG 18		9.85 JUN 15		32.4	---	---	---
1971	---CCCCCCC--	MANUAL	139 JUN 08		1 SEP 16		28.2 JUN 09		112	0.52	0.52	---
1972	-----CCCCCC--	MANUAL	224 JUN 25		1 AUG 23		36.6 JUN 25		116	---	---	---
1973	---CCCCCCCP-	MANUAL	208 MAY 16		1 AUG 02		16.2 MAY 16		101	0.47	0.50	5.1
1974	---CCCCCCC--	MANUAL	133 MAY 06		1 AUG 13		12.4 MAY 06		78.6	0.37	0.46	9.8
1975	---CCCCCCC--	MANUAL	375 MAY 06		1 SEP 10		8.15 MAY 09		75.2	0.35	0.43	9.4
1976	---CCCCCCC--	MANUAL	920 JUN 15		2 JUL 27		45.0 JUN 15		171	0.80	0.50	16.2
1977	--PCCCCCCC--	MANUAL	282 JUL 06		3 JUN 26		15.8 JUL 06		216	1.00	0.59	18.0
1978	---CCCCCCC--	MANUAL	284 APR 28		2 OCT 11		35.1 MAY 16		247	1.15	0.87	18.0
1979	-----CCCCC---	MANUAL	556 MAY 17		0 JUL 30		29.0 MAY 17		92.6	---	---	---
1980	---CCCCCC---	MANUAL	142 MAY 28		1 JUL 24		281 JUN 04	*	880	---	---	---
1981	-----CCCCC---	MANUAL	180 MAY 15		1 JUN 28		10.2 MAY 15		71.8	---	---	---
1982	---CCCCCCCP-	MANUAL	1 080 JUL 04	*	1 AUG 13		295 JUL 04	*	932	2.48	0.89	28.1
1983	---CCCCCCCP-	MANUAL	146 JUN 24		0 AUG 05		9.85 JUN 24		38.9	0.17	0.81	24.9
1984	--PCCCCCCC--	MANUAL	120 JUN 08		0 MAY 23		7.70 JUN 08		28.2	0.13	0.74	29.8
1985	---CCCCCCC--	MANUAL	287 SEP 13		0 APR 30		20.4 AUG 15		88.7	0.32	0.71	28.8
1986	-----PCCCCC--	MANUAL	305 JUL 16		0 JUN 07		85.0 JUL 17		218	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ALBERTA

DRIFTPILE RIVER NEAR DRIFTPILE - STATION NO. 07BH003

SUSPENDED SEDIMENT FOR 1988

LOCATION LAT 55 20 48 N LONG 115 47 38 W
DRAINAGE AREA 837 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 305 000 TONNES FOR THE PERIOD APR 01 TO OCT 31

REMARKS

DAY	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	DAY
1	1.05 B	596	54.1	8.29	142 S	102	8.06	377 S	262	1
2	1.25 B	886	83.3	9.06	247	193	6.82	140 S	83.7	2
3	0.815 B	458	32.3	13.5	884	1 010	5.67	105 S	53.3	3
4	0.718 B	393	24.3	19.6	1 240	2 100	5.14	82 S	36.4	4
5	0.752 B	442	28.7	21.3	1 030	1 900	4.63	73 S	29.2	5
6	1.87 B	780	126	21.7	823	1 540	4.19	86 S	31.1	6
7	3.43 B	1 190	353	19.1	470	778	3.74	72 S	23.3	7
8	5.58 B	1 570	757	24.0	1 320	2 740	3.88	141 S	48.8	8
9	7.84 B	2 150	1 420	23.6	1 240	2 830	3.80	88 S	18.5	9
10	9.18 B	1 280	1 020	21.2	850	1 580	3.26	81 S	17.3	10
11	8.65 B	688	512	18.5	385 S	583	3.02	53 S	13.8	11
12	8.85 B	542	414	18.0	499 S	776	4.75	187 S	88.8	12
13	8.84 B	518	395	17.0	279 S	410	8.51	158 S	89.4	13
14	8.18 B	255	114	19.7	501 S	853	5.11	104 S	46.9	14
15	8.04 B	88 S	37.4	21.2	439 S	804	4.04	87 S	19.9	15
16	8.18 B	58	25.0	17.4	321 S	483	3.49	73 S	22.0	16
17	8.25 B	118	83.7	16.4	332 S	842	3.37	49 S	14.3	17
18	8.18 B	484 S	368	16.1	316 S	440	3.06	41 S	10.8	18
19	11.4 B	433 S	426	16.0	333 S	480	3.81	84 S	21.1	19
20	13.5	859 S	789	16.8	208 S	298	16.4	551 S	781	20
21	17.8	848 S	1 300	17.8	447 S	680	12.4	448 S	480	21
22	16.0	570 S	788	39.5	1 840 S	8 280	8.21	289 S	205	22
23	12.3	358 S	382	43.0	1 470 S	5 480	6.14	144 S	76.4	23
24	10.0	316 S	272	38.1	988 S	3 010	4.82	107 S	45.5	24
25	8.24	170 S	121	27.4	755 S	1 790	4.22	89 S	32.6	25
26	7.20	170 S	106	22.6	648 S	1 280	3.48	88 S	19.7	26
27	7.74	267 S	179	19.7	528 S	900	3.03	87 S	14.9	27
28	11.0	887 S	853	18.1	406 S	585	2.87	37 S	9.17	28
29	12.8	524 S	580	13.2	293 S	334	2.58	22 S	4.80	29
30	10.7	313 S	289	11.3	490 S	488	2.23	21 S	4.05	30
31				9.83	271 S	223				31
TOTAL	228 113		11 582.8	613.38		40 971	183.34		2 582.32	TOTAL

DAY	JUL DAILY DISCHARGE (m³/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m³/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m³/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	1.98	15 S	2.57	8.53	388 S	283	0.780	10	0.68	1
2	1.76	13 S	1.98	8.84	384 S	293	0.780	15 S	1.02	2
3	1.52	9.7	1.14	5.35	187 S	77.2	0.823	17	1.21	3
4	1.44	10 S	1.24	39.1	2 240 S	5 630	1.12	24	2.32	4
5	8.30	392 S	281	19.0	834 S	1 630	1.08	25 S	2.33	5
6	16.3	804 S	851	11.1	520 S	498	0.842	21	1.71	6
7	9.19	287 S	228	7.73	323 S	216	0.888	15	1.12	7
8	6.29	161 S	87.5	5.88	250 S	127	0.781	10 S	0.67	8
9	5.06	108 S	47.2	5.00	225	97.2	0.728	8	0.50	9
10	8.72	358 S	270	4.07	188	65.4	0.705	8	0.49	10
11	11.6	380 S	381	3.37	154	44.8	0.842	16 S	1.31	11
12	18.3	628 S	993	2.78	121	29.2	1.50	35	4.54	12
13	15.5	288 S	386	2.29	92 S	18.2	2.61	81	11.5	13
14	17.0	345 S	507	1.87	84	10.8	1.78	40	6.06	14
15	53.4	2 410 S	11 100	1.68	40 S	5.81	1.48	38 S	4.54	15
16	84.1	3 070 S	22 300	1.48	35	3.20	1.26	32	3.48	16
17	72.9	1 850 S	12 300	1.39	20 S	2.40	1.15	28	2.78	17
18	191	7 080 S	117 000	1.35	18	2.10	1.09	25 S	2.35	18
19	128	4 030 S	44 800	1.24	17	1.82	1.04	21	1.89	19
20	54.2	1 390 S	8 510	1.13	21 S	2.05	0.888	18	1.37	20
21	32.8	821 S	2 330	1.07	75 S	6.83	0.825	11	0.88	21
22	21.9	541 S	1 020	1.06	51 S	4.58	0.897	9 S	0.70	22
23	17.5	588 S	804	1.01	37 S	3.23	0.878	9	0.68	23
24	36.0	1 340 S	4 170	1.01	33 S	2.88	0.838	9	0.65	24
25	24.8	718 S	1 530	0.975	13 S	1.10	0.814	9	0.63	25
26	17.2	540 S	802	0.927	18 S	1.52	0.839	17	1.23	26
27	15.3	348 S	328	0.902	18 S	1.40	1.24	48	5.14	27
28	14.8	377 S	478	0.883	19 S	1.42	12.1	588	594	28
29	13.5	384 S	480	0.835	18	1.15	14.9	826	808	29
30	11.1	352 S	338	0.808	10 S	0.70	10.8	526	482	30
31	10.4	336 S	304	0.756	8 S	0.52				31
TOTAL	921.88		230 480.87	131.287		6 883.71	88.325		1 943.76	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

ALBERTA

DRIFTPILE RIVER NEAR DRIFTPILE - STATION NO. 07EH003

SUSPENDED SEDIMENT FOR 1985

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	12.0	575	596							1
2	10.6	485	453							2
3	8.88	387	298							3
4	12.7	505	554							4
5	25.8 A	713	1 590							5
6	18.1 A	540	844							6
7	14.2 A	515 S	633							7
8	21.3 A	573 S	1 050							8
9	16.5 A	430 S	613							9
10	11.9 A	355 S	385							10
11	8.93	310	239							11
12	7.47	280	181							12
13	8.50	263	148							13
14	5.55	235 S	113							14
15	5.01	206	89.2							15
16	4.59	198	77.7							16
17	4.11	164	58.2							17
18	3.81	122 S	40.2							18
19	3.49	110	33.2							19
20	3.24	103	28.8							20
21	3.11	92	24.7							21
22	2.91	73	18.4							22
23	2.74	51 S	12.1							23
24	2.70	49	11.4							24
25	2.61	53	12.0							25
26	2.67	115	26.5							26
27	2.48	106 S	22.6							27
28	2.52	111	25.1							28
29	2.60	139	31.2							29
30	2.55 A	121	26.7							30
31	2.50 E	105	22.7							31
TOTAL	234.14		& 237.6							TOTAL

A - MANUAL GAUGE E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

ALBERTA

DRIFTPILE RIVER NEAR DRIFTPILE - STATION NO 07BH003

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 15 10 15		0 1	4 44		30 0	DH59	70		104														
APR 18 14 25		0 3	9 18	W	30 0	DH59	839	C															
APR 19 08 50		0 2	11 4	W	30 0	DH59	489	C															
APR 20 07 35		3 0	13 5	H	30 0	DH59	533	C															
APR 21 08 00		2 0	17 8	H	30 0	DH59	920		103	6	9	15	22	38	54	69	91	98	100		48	45	5
APR 21 16 20		2 0	17 8	H	30 0	DH59	716		109	11	14	26	35	54	69	84	97	100			31	55	14
APR 22 08 00		1 0	17 3		30 0	DH59	536	C	91														
APR 23 08 00		0 0	13 7		30 0	DH59	357	C															
APR 24 08 00		2 0	11 4		30 0	DH59	404	C															
APR 25 08 00		1 0	8 24	H	30 0	DH59	231	C	87														
APR 26 07 20		2 0	7 30	H	30 0	DH59	214	C															
APR 27 08 20		2 0	7 74	H	30 0	DH59	198	C															
APR 28 08 15		2 0	11 0	H	30 0	DH59	872	C															
APR 29 08 10		3 0	12 8	H	30 0	DH59	410	C	78														
APR 30 08 35		-1.0	10 7	H	30 0	DH59	372	C															
MAY 01 08 20		0 0	8 94		30 0	DH59	188	C															
MAY 11 16 20		5 0	18 7		30 0	DH59	382	C	75														
MAY 12 07 40		4 0	17 8		30 0	DH59	483	C	78														
MAY 13 07 30		3 0	16 8		30 0	DH59	1560	C															
MAY 14 08 25		4 0	17 8		30 0	DH59	285	C															
MAY 15 08 35		3 0	21 3		30 0	DH59	430	C	84														
MAY 16 08 35		5 0	17 9		30 0	DH59	385	C															
MAY 17 08 45		5 0	15 2		30 0	DH59	280	C															
MAY 18 17 25		9 0	17 3		30 0	DH59	327	C															
MAY 19 08 20		8 0	15 3		30 0	DH59	322	C	104														
MAY 20 08 30		10 0	15 9		30 0	DH59	241	C															
MAY 20 15 10		10 0	16 0		30 0	DH59	197																
MAY 21 08 30		8 0	17 0		30 0	DH59	287																
MAY 22 08 30		6 0	42 0		30 0	DH59	1980		126	8	11	19	25	45	68	89	97	100			31	58	11
MAY 23 08 10		3 0	44 2		30 0	DH59	1470		123	8	11	17	24	37	53	71	88	100			47	42	11
MAY 24 08 45		8 0	38 0		30 0	DH59	983		100	5	8	18	24	38	53	70	88	100			47	44	9
MAY 25 08 35		7 0	27 7		30 0	DH59	750		101	7	10	18	24	37	48	68	84	100			52	38	10
MAY 26 08 15		10 0	22 8		30 0	DH59	2140	C	103														
MAY 27 08 20		12 0	19 4		30 0	DH59	521	C															
MAY 28 10 25		12 0	18 1		30 0	DH59	399	C															
MAY 28 13 40		15 0	13 2		30 0	DH59	283	C	108														
MAY 30 07 25		14 0	11 4		30 0	DH59	512	C															
MAY 31 08 35		15 0	8 52		30 0	DH59	217	C															
JUN 01 08 05		15 0	8 28		30 0	DH59	447	C															
JUN 02 08 50		14 0	7 15		30 0	DH59	148	C	122														
JUN 03 06 55		11 0	6 05		30 0	DH59	8160	C	122														
JUN 03 07 00		11 0	8 05		30 0	DH59	8920	C	119														
JUN 04 10 25		12 0	5 17		30 0	DH59	88		132														
JUN 05 08 05		12 0	4 88		30 0	DH59	74	C															
JUN 06 08 30		15 0	4 20		30 0	DH59	88	C															
JUN 07 11 25		15 0	3 73		30 0	DH59	88	C															
JUN 08 08 30		15 0	3 53		30 0	DH59	138	C															
JUN 09 08 20		14 0	4 01		30 0	DH59	4480	C	132														
JUN 09 08 25		14 0	4 01		30 0	DH59	45	C	138														
JUN 10 08 15		14 0	3 38		30 0	DH59	85	C	141														
JUN 11 08 25		13 0	2 97		30 0	DH59	52	C															
JUN 12 08 25		11 0	3 52		30 0	DH59	70	C															
JUN 13 08 15		11 0	5 71		30 0	DH59	138	C															
JUN 14 07 40		10 0	5 23		30 0	DH59	114	C	132														
JUN 15 09 00		12 0	4 14		30 0	DH59	63	C															
JUN 16 08 20		13 0	3 49		30 0	DH59	79	C															
JUN 17 09 05		15 0	3 41		30 0	DH59	47																
JUN 18 08 50		14 0	3 00		30 0	DH59	40																
JUN 19 09 05		14 0	3 56		30 0	DH59	47																
JUN 20 06 35		11 0	19 2		30 0	DH59	653	C															
JUN 20 13 25		12 0	21 1		30 0	DH59	847	C	122														
JUN 21 07 55		8 0	13 3		30 0	DH59	484	C															
JUN 22 08 30		12 0	8 58		30 0	DH59	304	C	108														
JUN 23 08 45		14 0	8 30		30 0	DH59	187	C															
JUN 23 13 00		14 0	8 06		30 0	DH59	102	C															
JUN 24 09 10		15 0	5 02		30 0	DH59	112	C															
JUN 25 21 05		16 0	3 80		30 0	DH59	75	C															
JUN 26 08 35		13 0	3 52		30 0	DH59	64																
JUN 27 08 15		13 0	3 03		30 0	DH59	58																
JUN 28 09 50		16 0	2 91		30 0	DH59	39		137														
JUN 29 09 50		16 0	2 61		30 0	DH59	21																
JUN 30 10 25		17 0	2 29		30 0	DH59	21																
JUL 01 20 10		21 0	1 88		30 0	DH59	12																
JUL 02 09 15		18 0	1 80		30 0	DH59	18																
JUL 03 07 25		18 0	1 57		30 0	DH59	10																
JUL 04 08 55		14 0	1 34		30 0	DH59	9																
JUL 05 07 15		12 0	1 88		30 0	DH59	13		182														
JUL 05 07 20		12 0	1 88		30 0	DH59	8		180														
JUL 06 08 30		12 0	17 4		30 0	DH59	733	C															
JUL 06 08 35		12 0	17 4		30 0	DH59	575	C															
JUL 07 10 30		14 0	9 19		30 0	DH59	848	C	111														
JUL 07 10 35		14 0	9 19		30 0	DH59	1570	C	111														
JUL 08 08 40		15 0	8 48		30 0	DH59	230	C															
JUL 08 08 45		15 0	8 48		30 0	DH59	111																
JUL 09 07 40		16 0	4 88		30 0	DH59	102																
JUL 09 07 45		16 0	4 88		30 0	DH59	79																
JUL 10 08 25		16 0	7 33		30 0	DH59	484	C															
JUL 10 08 30		15 0	7 33		30 0	DH59	118	C															
JUL 11 08 35		15 0	8 47		30 0	DH59	8630	C	125														
JUL 11 08 40		15 0	8 47		30 0	DH59	207	C	117														
JUL 12 08 30		13 0	19 6		30 0	DH59	802	C															
JUL 12 08 35		13 0	19 6		30 0	DH59	881	C															
JUL 13 08 35		12 0	18 4		30 0	DH59	375	C															
JUL 13 09 40		12 0	18 4		30 0	DH59	231	C															
JUL 14 08 35		11 0	15 1		30 0	DH59	288	C															
JUL 14 08 40		11 0	15 1		30 0	DH59	195	C															
JUL 15 08 10		10 0	37 2		30 0	DH59	1130	C															
JUL 15 08 15		10 0	37 2		30 0	DH59	1120	C															
JUL 15 17 30		11 0	70 0		30 0	DH59	2320	C															
JUL 15 17 35		11 0	70 0		30 0	DH59	1910	C															

NOTE SINGLE VERTICAL LOCATED AT 30 METRES FOR 1986

DISCHARGE SYMBOL(S) H - DAILY MEAN W - DAILY MEAN, ICE CONDITIONS
CONCENTRATION SYMBOL(S) C - COARSE MATERIAL PRESENT

CONTINUED

DRIFTPILE RIVER NEAR DRIFTPILE - STATION NO. 07BH003 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1988

DATE	TIME	WATER TEMP (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JUL 15	08 10	10.0	88.7	30.0	DH59	4010		187														
JUL 15	08 15	10.0	88.7	30.0	DH59	3580		159														
JUL 15	12 45	10.0	78.9	30.0	DH59	2980		133	16	22	35	44	63	84	95	100				16	62	22
JUL 17	08 35	10.0	82.8	30.0	DH59	2570		132														
JUL 17	08 40	10.0	82.8	30.0	DH59	2190		127														
JUL 18	08 35	10.0	177	30.0	DH59	6830		189														
JUL 18	08 40	10.0	177	30.0	DH59	6840		189														
JUL 19	08 25	11.0	142	30.0	DH59	4430		185														
JUL 19	08 30	11.0	142	30.0	DH59	4430		145														
JUL 19	15 40	14.0	84.7	30.0	DH59	3290		121														
JUL 19	15 45	14.0	84.7	30.0	DH59	2050		116														
JUL 20	08 10	12.0	57.8	30.0	DH59	1620		120														
JUL 20	08 15	12.0	57.8	30.0	DH59	1270		117														
JUL 21	07 50	14.0	34.1	30.0	DH59	983	C															
JUL 21	07 55	14.0	34.1	30.0	DH59	747	C															
JUL 22	08 20	15.0	23.0	30.0	DH59	852	C															
JUL 22	08 25	15.0	23.0	30.0	DH59	483	C															
JUL 23	08 15	15.0	18.5	30.0	DH59	623	C															
JUL 23	08 20	15.0	18.5	30.0	DH59	321	C															
JUL 24	08 00	13.0	41.2	30.0	DH59	1880	C	137														
JUL 24	08 05	13.0	41.2	30.0	DH59	1210	C	184														
JUL 25	08 25	13.0	28.3	30.0	DH59	740	C															
JUL 25	08 30	13.0	28.3	30.0	DH59	884	C															
JUL 26	09 50	13.0	17.2	30.0	DH59	839	C															
JUL 27	08 40	13.0	15.7	30.0	DH59	324	C															
JUL 28	10 35	13.5	15.0	30.0	DH59	318	C	130														
JUL 28	11 15	13.5	15.0	30.0	DH59	574	C															
JUL 28	11 20	13.5	15.0	30.0	DH59	348	C															
JUL 29	08 40	11.0	13.8	30.0	DH59	414	C															
JUL 29	08 45	11.0	13.8	30.0	DH59	464	C															
JUL 30	08 20	12.0	11.1	30.0	DH59	348	C															
JUL 30	08 25	12.0	11.1	30.0	DH59	228	C															
JUL 31	08 25	13.0	10.5	30.0	DH59	380	C															
JUL 31	08 30	13.0	10.5	30.0	DH59	258	C															
AUG 01	08 45	15.0	8.77	30.0	DH59	420	C															
AUG 02	12 00	17.0	8.51	30.0	DH59	298	C															
AUG 02	12 05	17.0	8.51	30.0	DH59	443	C															
AUG 03	08 05	18.0	5.59	30.0	DH59	182		152														
AUG 04	08 00	18.0	43.2	30.0	DH59	1850		135														
AUG 04	15 00	14.0	38.2	30.0	DH59	3340		159	22	29	43	55	70	79	87	98	100			21	50	29
AUG 04	15 05	14.0	38.2	30.0	DH59	3020		158	27	31	48	57	78	88	93	99	100			14	55	31
AUG 05	08 15	12.0	20.4	30.0	DH59	1120		112														
AUG 05	08 20	12.0	20.4	30.0	DH59	833		117														
AUG 06	07 00	13.0	11.9	30.0	DH59	823	C															
AUG 06	07 05	13.0	11.9	30.0	DH59	488	C															
AUG 07	08 45	18.0	7.93	30.0	DH59	322	C															
AUG 08	07 15	18.0	8.10	30.0	DH59	323	C															
AUG 08	07 20	18.0	8.10	30.0	DH59	189	C															
AUG 13	17 00	21.0	4.85	30.0	DH59	88	C	158														
AUG 15	08 00	14.0	1.74	30.0	DH59	42	C															
AUG 17	20 15	17.0	1.41	30.0	DH59	19																
AUG 20	08 30	12.0	1.15	30.0	DH59	16		183														
AUG 21	08 10	11.0	1.07	30.0	DH59	84																
AUG 22	09 50	12.0	1.05	30.0	DH59	61																
AUG 23	08 45	12.0	1.00	30.0	DH59	37																
AUG 24	09 00	11.0	1.02	30.0	DH59	36																
AUG 25	08 35	10.0	0.995	30.0	DH59	32																
AUG 25	13 10	11.0	0.984	30.0	DH59	11																
AUG 26	08 40	11.0	0.928	30.0	DH59	20																
AUG 27	10 35	13.0	0.902	30.0	DH59	18		200														
AUG 27	10 40	13.0	0.902	30.0	DH59	18		200														
AUG 28	09 40	15.0	0.881	30.0	DH59	22																
AUG 28	09 45	15.0	0.881	30.0	DH59	16																
AUG 30	19 20	17.0	0.788	30.0	DH59	10		200														
AUG 30	19 25	17.0	0.788	30.0	DH59	8		203														
AUG 31	10 00	12.0	0.755	30.0	DH59	8		206														
AUG 31	10 05	12.0	0.755	30.0	DH59	8		207														
SEP 02	09 40	13.0	0.800	30.0	DH59	17		205														
SEP 02	09 45	13.0	0.800	30.0	DH59	14		205														
SEP 05	08 15	8.0	1.09	30.0	DH59	28																
SEP 08	08 05	8.0	0.788	30.0	DH59	11																
SEP 11	08 40		0.675	30.0	DH59	19		181														
SEP 15	08 35		1.68	30.0	DH59	38		171														
SEP 18	11 05		1.13	30.0	DH59	25																
SEP 22	10 50	8.0	0.902	30.0	DH59	9																
OCT 07	08 05		13.4	30.0	DH59	435	C															
OCT 07	08 10		13.4	30.0	DH59	480	C															
OCT 08	08 50		22.8	30.0	DH59	857	C	109														
OCT 08	08 55		22.8	30.0	DH59	518	C	111														
OCT 09	08 45		16.9	30.0	DH59	540	C															
OCT 09	08 50		16.9	30.0	DH59	373	C															
OCT 10	09 30		12.0	30.0	DH59	339	C															
OCT 10	09 35		12.0	30.0	DH59	387	C															
OCT 14	15 40		5.35	30.0	DH59	215	C															
OCT 14	15 45		5.35	30.0	DH59	240	C															
OCT 18	10 55		3.82	30.0	DH59	107	C															
OCT 18	11 00		3.82	30.0	DH59	129	C															
OCT 23	15 10		2.88	30.0	DH59	44																
OCT 23	15 15		2.88	30.0	DH59	53																
OCT 27	13 30	3.0	2.28	30.0	DH59	173		157														
OCT 27	13 35	3.0	2.28	30.0	DH59	40		147														

NOTE : SINGLE VERTICAL LOCATED AT 30 METRES FOR 1988

CONCENTRATION SYMBOL(S) C - COARSE MATERIAL PRESENT

ALBERTA

DRIFTPILE RIVER NEAR DRIFTPILE - STATION NO. 07BH003

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY : MAY-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1977	---PPPPPPP--	MANUAL	983	APR 15	13	AUG 24	---	---	---	---	---	---
1978	----CCCCCCP-	MANUAL	6 780	JUN 14	11	OCT 18	109 000	JUN 14	425 000 *	2 310	2 310	---
1980	-P-CCCCCCC--	MANUAL	3 340	MAY 28	11	OCT 24	5 080	MAY 28	35 300	185	1 240	85.5
1981	---PCCCCCC--	MANUAL	1 370	JUL 24	5	SEP 04	5 880	JUL 23	28 800	150	875	82.0
1982	----PCCPPC--	MANUAL	2 010	AUG 04	2	OCT 13 *	19 300	AUG 04	46 400	---	---	---
1983	---PCCCCCC--	MANUAL	4 350	JUN 26	5	JUN 03	98 500	JUN 26	370 000	2 010	1 180	50.1
1984	---CCCCCC---	MANUAL	5 150	JUL 2	9	AUG 12	27 800	JUN 07	148 000	---	---	---
1985	---PCCCCCC--	MANUAL	4 020	JUN 25	6	AUG 24	18 800	MAY 04	128 000	585	1 040	44.7
1986	---CCCCCCC--	MANUAL	9 160	JUN 03 *	8	JUL 05	117 000	JUL 18 *	305 000	1 590	1 140	34.2

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

EAST PRAIRIE RIVER NEAR ENILDA - STATION NO. 07BF001

LOCATION: LAT 55 25 00 N LONG 118 20 20 W
DRAINAGE AREA: 1 480 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: MANUAL

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 22	10:20	8.0	28.9	30.0	X	DH59	3230		127	7	8	11	17	27	44	89	88	99			56	38	6
MAY 20	10:55	16.0	20.7	30.0	X	DH59	926		137														
MAY 23	12:20	10.0	46.3	25.0	X	DH59	2480		143	7	9	14	19	34	52	75	95				48	43	9
JUN 18	13:00	19.0	4.58	31.0		DH48	63		177														
JUL 14	11:10	13.0	37.6	30.0	X	DH59	2780	C	167														
JUL 18	11:48	11.0	132	MID	X	D49	5620		171	12	14	22	28	42	58	75	85				42	44	14
JUL 18	13:40	15.0	88.3	31.0		D48	5220	C	188														
JUL 21	11:40	18.5	56.0	MID	X	DH59	3330	C	181														
AUG 25	13:35	18.0	2.41	28.0	X	DH48	35		257														
SEP 22	09:45	10.0	1.83	MID	X	DH48	24		239														
OCT 27	10:50	3.5	3.40	20.0	X	DH48	78		211														

NOTE: SINGLE VERTICAL LOCATED AT 31 METRES FOR 1986

CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1974	---PP--PPP--	MANUAL	3 500	MAY 08	17	OCT 28	---	---	---	---	---	---
1975	---PPPPPPP--	MANUAL	5 730	JUL 18	32	SEP 25	---	---	---	---	---	---
1976	---PPPP-PP--	MANUAL	9 880	JUN 27	46	OCT 07	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	3 890	APR 13	27	AUG 25	---	---	---	---	---	---
1978	---------PP--	MANUAL	524	OCT 23	373	SEP 27	---	---	---	---	---	---
1979	---PPPPPP---	MANUAL	9 280	JUL 03	31	SEP 18	---	---	---	---	---	---
1980	----PPPPPP--	MANUAL	835	JUN 03	38	JUL 28	---	---	---	---	---	---
1981	----P-P-PP--	MANUAL	178	MAY 27	21	JUL 07	---	---	---	---	---	---
1982	---PPPP-PP--	MANUAL	10 100	MAY 04	26	OCT 04	---	---	---	---	---	---
1983	---PPPPP-P--	MANUAL	12 300	JUN 26 *	55	OCT 24	---	---	---	---	---	---
1984	---PPPPPP---	MANUAL	5 040	JUN 09	33	SEP 24	---	---	---	---	---	---
1985	---PPPPPP---	MANUAL	4 130	MAY 05	13	AUG 28 *	---	---	---	---	---	---
1986	---PPPPPPP--	MANUAL	5 620	JUL 15	24	SEP 22	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ELBOW RIVER AT BRAGG CREEK - STATION NO. 05BJ004

LOCATION: LAT 50 56 53 N LONG 114 34 10 W
DRAINAGE AREA: 781 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 15	13:30	0.5	3.22	7.5	X DIP	1	256														
APR 28	09:18	3.5	3.88	10.0	X DH48	2	253														
MAY 22	15:40	7.5	23.4	10.0	X DH48	36	182														
JUN 24	12:55	9.5	13.5	8.5	X DH48	1	188														
JUL 18	14:35	10.5	15.1	10.0	X DH48	5	196														
AUG 27	12:00	11.0	7.08	8.4	X DH48	1	212														
SEP 30	11:25	5.5	9.04	10.0	X DH48	2	216														
NOV 03	14:20	5.0	8.03	13.0	X DH48	1	232														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)			TOTAL FOR PERIOD (TONNES)	SUMMARY MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	HISTORICAL STANDARD ERROR OF MEAN %
1968	-----E-------	MANUAL	347	JUN 08		10	JUN 21		1 320	JUN 08		4 690	---	---	---
1969	----CCCCCC--	MANUAL	1 210	JUN 25	*	0	SEP 08	*	11 700	JUN 29	*	---	---	---	---
1970	---PPP------	MANUAL	1 200	JUN 16		2	APR 27		---	---		---	---	---	---
1971	--CCCCCCCCCC	MANUAL	859	JUN 05		0	MAR 02		6 380	JUN 05		---	72.5	72.5	---
1972	CCCCCCCCCC--	MANUAL	455	MAY 31		0	JAN 08		1 890	MAY 31		13 900	56.5	84.8	12.4
1973	--CCCCCCCCP-	MANUAL	327	MAY 26		0	MAR 02		1 220	MAY 26		7 380	30.0	53.1	23.4
1974	--CCCCCCCCP-	MANUAL	1 030	JUN 17		1	APR 08		5 820	JUN 17		34 300	* 140	74.8	31.3
1975	--CCCCCCCC--	MANUAL	371	JUN 20		0	MAY 13		1 580	JUN 20		8 050	24.7	84.8	32.0
1976	----PPPPP---	MANUAL	5	MAY 03		1	JUN 03		---	---		---	---	---	---
1977	---PP-PPP---	MANUAL	7	APR 05		1	MAY 04		---	---		---	---	---	---
1978	----PP-PP---	MANUAL	440	JUN 05		1	AUG 30		---	---		---	---	---	---
1979	---PP-PPP---	MANUAL	13	MAY 29		0	JUL 25		---	---		---	---	---	---
1980	---PP-PP-P--	MANUAL	20	MAY 30		2	JUL 30		---	---		---	---	---	---
1981	----PPPP----	MANUAL	840	MAY 28		2	AUG 28		---	---		---	---	---	---
1982	----PPPPP---	MANUAL	21	JUN 07		1	SEP 28		---	---		---	---	---	---
1983	---PPPPP----	MANUAL	84	JUN 24		3	AUG 17		---	---		---	---	---	---
1984	----PPPP----	MANUAL	59	JUN 11		0	MAY 03		---	---		---	---	---	---
1985	----PPPPPP--	MANUAL	345	SEP 13		2	OCT 30		---	---		---	---	---	---
1986	--PPPPPPP-P-	MANUAL	36	MAY 22		1	MAR 19		---	---		---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ELLS RIVER NEAR THE MOUTH - STATION NO. 07DA017

LOCATION: LAT 57 16 04 N LONG 111 42 51 W
DRAINAGE AREA: 2 450 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 07	12:00	5.0	49.1	1ORB	DH48	1240	157	15	22	33	40	57	71	86	98	100			29	49	22
MAY 13	07:20	8.0	33.1	1ORB	DIP	439	139														
JUN 21	12:10	14.0	17.7	1ORB	DIP	137	136														
AUG 23	11:20	11.0	10.8	1ORB	DIP	32	155														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

ALBERTA

ELLS RIVER NEAR THE MOUTH - STATION NO. 07DA017

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			SAMPLED CONCENTRATION MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1976	---PP-PPP-P-	MANUAL	1 500	APR 15	*	8	AUG 08		---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	144	APR 28		4	JUN 27		---	---	---	---	---	---
1978	---PPPPPP---	MANUAL	1 490	APR 27		3	AUG 22	*	---	---	---	---	---	---
1979	---PPPPPPP--	MANUAL	717	APR 30		8	JUL 28		---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	40	APR 24		2	JUN 24		---	---	---	---	---	---
1981	-----P-PP----	MANUAL	41	MAY 28		4	AUG 28		---	---	---	---	---	---
1982	------P-PP---	MANUAL	8	JUN 24		2	AUG 03		---	---	---	---	---	---
1983	---P-P-PP----	MANUAL	380	APR 26		6	JUN 21		---	---	---	---	---	---
1984	-----P--PP---	MANUAL	40	MAY 22		13	SEP 23		---	---	---	---	---	---
1985	---P-P-------	MANUAL	787	APR 29		116	JUN 14		---	---	---	---	---	---
1986	-----PP-P-----	MANUAL	1 240	MAY 07		32	AUG 23		---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

ALBERTA

EUNICE CREEK NEAR HINTON - STATION NO. 07AF005

SUSPENDED SEDIMENT FOR 1988

LOCATION: LAT 53 08 10 N LONG 117 13 55 W
DRAINAGE AREA: 17.1 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 290 TONNES FOR THE PERIOD MAY 29 TO OCT 31

REMARKS:

DAY	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	JUL DAILY DISCHARGE (m³/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	DAY
1	0.056 B			0.227	5	0.10	0.170	7	0.10	1
2	0.049 B			0.211	2	0.04	0.182	2	0.03	2
3	0.063			0.200	3	0.05	0.155	1	0.01	3
4	0.093			0.192	4	0.07	0.151	5	0.07	4
5	0.187			0.188	3	0.05	0.212	9	0.18	5
6	0.301			0.185	1	0.02	0.233	5	0.10	6
7	0.420			0.182	4	0.06	0.261	3	0.07	7
8	0.363 A			0.181	3	0.05	0.318	4	0.11	8
9	0.278 A			0.182	1	0.01	0.378	8	0.26	9
10	0.276 A			0.186	2	0.03	0.340	4	0.12	10
11	0.271 A			0.175	1	0.02	0.318	3	0.08	11
12	0.212 A			0.187	1	0.01	0.298	2	0.05	12
13	0.221 A			0.182	2	0.03	0.282	2	0.05	13
14	0.206 A			0.153	7	0.09	0.271	3	0.07	14
15	0.191 A			0.188	2	0.03	0.302	9	0.23	15
16	0.147 A			0.181	3	0.04	1.41	304	37.0	16
17	0.178 A			0.153	1	0.01	3.82	305	95.4	17
18	0.332 A			0.151	0	0	4.01	213	73.8	18
19	0.251 A			0.167	1	0.01	2.20	141	29.2	19
20	0.241 A			0.158	3	0.04	1.67	101	14.6	20
21	0.238 A			0.154	1	0.01	1.27	82	6.80	21
22	0.239 E			0.144	2	0.02	1.08	46	4.29	22
23	0.243 E			0.140	2	0.02	1.22	44	4.84	23
24	0.258 E			0.139	1	0.01	0.983	38	3.16	24
25	0.293 E			0.139	1	0.01	0.770	28	1.83	25
26	0.365 A			0.140	3	0.04	0.751	19	1.23	26
27	0.363 E			0.139	1	0.01	0.623	15	0.81	27
28	0.342 A			0.139	1	0.01	0.570	14	0.69	28
29	0.280 A	5	0.15	0.154	4	0.05	0.777	32	2.15	29
30	0.267	3	0.07	0.177	5	0.08	0.582	8	0.40	30
31	0.235	3	0.06				0.481	9	0.37	31
TOTAL	7.400		0.28	4.983		1.02	28.084		277.98	TOTAL

DAY	AUG DAILY DISCHARGE (m³/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m³/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m³/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	DAY
1	0.426	7	0.26	0.141	0	0	0.334	3	0.08	1
2	0.384	7	0.23	0.141	0	0	0.311	2	0.05	2
3	0.354	5	0.15	0.165	4	0.06	0.312	3	0.08	3
4	0.326	4	0.11	0.285	13	0.32	0.386	5	0.17	4
5	0.322	1	0.03	0.265	8	0.18	0.871	23	1.33	5
6	0.294	6	0.15	0.207	1	0.02	0.881	27	2.29	6
7	0.286	2	0.05	0.184	0	0	0.818	19	1.50	7
8	0.252	2	0.04	0.174	0	0	0.878	10	0.76	8
9	0.238	2	0.04	0.168	0	0	0.885	3	0.18	9
10	0.228	1	0.02	0.192	5	0.08	0.575	2	0.10	10
11	0.388	13	0.44	0.256	7	0.15	0.492	1	0.04	11
12	0.433	16	0.67	0.223	3	0.06	0.432	1	0.04	12
13	0.310	4	0.11	0.218	2	0.04	0.374	0	0	13
14	0.271	3	0.07	0.208	1	0.02	0.342	0	0	14
15	0.250	2	0.04	0.189	0	0	0.318	0	0	15
16	0.236	1	0.02	0.181	0	0	0.295	0	0	16
17	0.223	2	0.04	0.168	0	0	0.275	0	0	17
18	0.212	3	0.05	0.179	0	0	0.256	0	0	18
19	0.233	4	0.08	0.174	1	0.02	0.245	0	0	19
20	0.211	3	0.05	0.169	2	0.03	0.232	0	0	20
21	0.185	0	0	0.155	3	0.03	0.221	0	0	21
22	0.186	1	0.02	0.162	5	0.04	0.208	0	0	22
23	0.178	0	0	0.159	3	0.04	0.199	0	0	23
24	0.173	1	0.01	0.154	3	0.04	0.192	0	0	24
25	0.175	1	0.02	0.230	9	0.18	0.183	0	0	25
26	0.188	0	0	0.300	10	0.26	0.178	0	0	26
27	0.180	0	0	0.252	6	0.13	0.183	0	0	27
28	0.158	0	0	0.247	3	0.06	0.171	0	0	28
29	0.153	0	0	0.261	1	0.02	0.163	0	0	29
30	0.148	0	0	0.308	3	0.08	0.159	0	0	30
31	0.144	0	0				0.154 B	0	0	31
TOTAL	7.893		2.76	6.157		1.86	11.317		6.63	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS E - ESTIMATED

ALBERTA

EUNICE CREEK NEAR HINTON - STATION NO. 07AF005

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 10	08:55		0.277	MID	DIP	8															
MAY 11	08:50		0.271	MID	DIP	11															
MAY 12	09:10		0.212	MID	DIP	1	87														
MAY 15	11:00		0.191	MID	DIP	13															
MAY 16	09:05		0.147	MID	DIP	2															
MAY 17	09:30		0.178	MID	DIP	5															
MAY 18	09:35		0.332	MID	DIP	19															
MAY 19	09:15		0.281	MID	DIP	3	83														
MAY 20	12:00E		0.240	MID	DIP	3															
MAY 21	08:00		0.238	MID	DIP	1															
MAY 22	07:15		0.254	MID	DIP	6															
MAY 23	08:10		0.387	MID	DIP	8															
MAY 24	08:40		0.384	MID	DIP	9															
MAY 25	08:15		0.308	MID	DIP	7															
MAY 26	08:30		0.344	MID	DIP	4	74														
MAY 28	09:00		0.343	MID	DIP	8															
MAY 29	10:25		0.291	MID	DIP	6															
MAY 29	14:35	5.0	0.280	1.6 X	DH48	8	110														
MAY 30	08:00		0.254	MID	DIP	3															
MAY 31	09:50		0.234	MID	DIP	3															
JUN 01	10:45		0.229	MID	DIP	6															
JUN 02	13:25		0.210	MID	DIP	1	84														
JUN 03	08:45		0.201	MID	DIP	3															
JUN 04	08:50		0.218	MID	DIP	4															
JUN 05	08:51		0.203	MID	DIP	3															
JUN 06	08:55		0.178	MID	DIP	0															
JUN 07	09:10		0.188	MID	DIP	6															
JUN 08	09:00		0.206	MID	DIP	3															
JUN 09	10:40		0.180	MID	DIP	1	108														
JUN 10	08:50		0.181	MID	DIP	2															
JUN 11	09:30		0.188	MID	DIP	0															
JUN 12	09:43		0.187	MID	DIP	1															
JUN 13	08:48		0.184	MID	DIP	2															
JUN 14	10:05		0.185	MID	DIP	0															
JUN 15	09:35		0.175	MID	DIP	1															
JUN 16	10:48		0.178	MID	DIP	4	108														
JUN 17	10:22		0.182	MID	DIP	0															
JUN 18	08:45		0.158	MID	DIP	0															
JUN 19	10:34		0.192	MID	DIP	1															
JUN 20	08:55		0.188	MID	DIP	3															
JUN 21	11:10		0.168	MID	DIP	1															
JUN 22	11:30		0.168	MID	DIP	2															
JUN 24	09:00		0.163	MID	DIP	1															
JUN 25	08:45		0.145	MID	DIP	1															
JUN 26	11:35		0.133	MID	DIP	3															
JUN 27	09:30		0.140	MID	DIP	0															
JUN 28	08:30		0.123	MID	DIP	1															
JUN 29	08:20		0.130	MID	DIP	1															
JUN 30	09:10		0.200	MID	DIP	4	105														
JUL 01	11:55		0.190	MID	DIP	9															
JUL 02	09:00		0.118	MID	DIP	1															
JUL 03	11:00		0.184	MID	DIP	1															
JUL 04	11:00		0.172	MID	DIP	8															
JUL 05	11:45		0.243	MID	DIP	8															
JUL 06	09:55		0.218	MID	DIP	4															
JUL 07	09:00		0.300	MID	DIP	3															
JUL 08	10:20		0.308	MID	DIP	1															
JUL 09	08:50		0.358	MID	DIP	5															
JUL 09	18:00		0.524	MID	DIP	9															
JUL 10	08:40		0.337	MID	DIP	4															
JUL 11	07:30		0.368	MID	DIP	4															
JUL 12	10:00		0.332	MID	DIP	2															
JUL 13	09:05		0.278	MID	DIP	2															
JUL 14	09:25		0.254	MID	DIP	3															
JUL 15	09:12		0.367	MID	DIP	4															
JUL 15	10:57	5.0	0.318	2.4 X	DH48	8	111														
JUL 15	10:50		2.25	MID	DIP	182															
JUL 17	09:25		2.51	MID	DIP	313															
JUL 18	12:00E		4.01 H	MID	DIP	214															
JUL 18	10:24		2.51	MID	DIP	149															
JUL 20	11:50		1.88	MID	DIP	104															
JUL 21	14:20		0.949	MID	DIP	54															
JUL 22	11:27		0.722	MID	DIP	44															
JUL 23	12:00		1.12	MID	DIP	43															
JUL 24	10:30		0.931	MID	DIP	38															
JUL 25	08:45		0.694	MID	DIP	31															
JUL 26	09:30		0.667	MID	DIP	18															
JUL 27	09:40		0.584	MID	DIP	15															
JUL 28	10:00		0.182	MID	DIP	13															
JUL 29	12:10		0.833	MID	DIP	38															
JUL 30	08:24		0.646	MID	DIP	7															
JUL 31	08:30		0.490	MID	DIP	5															
JUL 31	11:30	4.0	0.478	2.8 X	DH48	13	141														
AUG 01	12:34		0.449	MID	DIP	7															
AUG 02	07:50		0.415	MID	DIP	8															
AUG 03	10:10		0.480	MID	DIP	5															
AUG 04	10:53		0.352	MID	DIP	4															
AUG 05	09:55		0.378	MID	DIP	0															
AUG 06	09:30		0.320	MID	DIP	7															
AUG 07	08:05		0.315	MID	DIP	2															
AUG 08	10:50		0.278	MID	DIP	15															
AUG 09	08:55		0.230	MID	DIP	2															
AUG 10	11:00		0.223	MID	DIP	1															
AUG 11	10:30		0.221	MID	DIP	1															
AUG 12	07:45		0.408	MID	DIP	23															
AUG 13	08:55		0.344	MID	DIP	4															
AUG 14	08:45		0.263	MID	DIP	3															
AUG 15	11:05		0.253	MID	DIP	3															
AUG 16	11:20		0.252	MID	DIP	1															
AUG 17	11:25		0.247	MID	DIP	2															
AUG 18	11:40		0.204	MID	DIP	3															
AUG 19	11:40		0.253	MID	DIP	4															

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

TIME SYMBOL: E - ESTIMATED
DISCHARGE SYMBOL(S): H - DAILY MEAN
VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

CONTINUED

EUNICE CREEK NEAR HINTON - STATION NO. 07AP005 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1988

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
AUG 20	11:30		0.210	MID	DIP	3															
AUG 21	09:45		0.186	MID	DIP	0															
AUG 22	11:15		0.186	MID	DIP	1															
AUG 23	09:55		0.151	MID	DIP	0															
AUG 24	10:10		0.150	MID	DIP	1															
AUG 26	14:25		0.170	MID	DIP	1															
AUG 26	11:45		0.185	MID	DIP	0															
AUG 27	12:30		0.155	MID	DIP	0															
AUG 28	10:20		0.138	MID	DIP	0															
SEP 04	11:20		0.285	MID	DIP	14															
SEP 08	10:00		0.158	MID	DIP	0															
SEP 11	13:20		0.212	MID	DIP	6															
SEP 11	14:10	5.0	0.247	10LB K	DIP	8	115														
SEP 15	08:40		0.201	MID	DIP	0															
SEP 22	11:45		0.161	MID	DIP	3															
SEP 28	12:20		0.255	MID	DIP	1															
OCT 06	11:15		0.942	MID	DIP	28															

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1988

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY - APR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1987	·····PP··	MANUAL	2	OCT 04	0	SEP 20 *	0.01	OCT 04	---	---	---	---
1988	····PCCCCC··	MANUAL	55	JUN 12	1	SEP 11	4.29	JUN 30	54.2	---	---	---
1989	····CCCCCC··	MANUAL	508	AUG 05	1	JUN 12	125	AUG 05	571 *	---	---	---
1970	····CCCCCC··	MANUAL	132	MAY 10	1	SEP 08	20.8	JUN 18	71.8	---	---	---
1971	···CCCCCCC··	MANUAL	345	JUN 08	1	AUG 11	84.9	JUN 09	289	1.40	1.40	---
1972	····CCCCCC··	MANUAL	386	JUN 25	0	AUG 09	88.6	JUN 25	228	---	---	---
1973	···CCCCCCCP·	MANUAL	401	JUN 24	1	JUL 10	84.6	MAY 15	411	1.92	1.88	15.7
1974	···CCCCCCC··	MANUAL	124	JUL 12	1	AUG 08	8.88	MAY 08	107	0.50	1.27	32.7
1975	···CCCCCCC··	MANUAL	135	MAY 08	0	JUN 11	7.56	MAY 09	35.7	0.17	1.00	40.3
1976	···CCCCCCC··	MANUAL	111	JUN 16	0	JUL 27	6.19	JUN 16	33.4	0.16	0.83	42.7
1977	··PCCCCCCC··	MANUAL	408	MAY 11	0	SEP 14	41.6	MAY 11	483	2.16	1.05	34.7
1978	···CCCCCCCP·	MANUAL	257	MAY 16	1	SEP 01	45.1	MAY 16	148	0.89	1.00	31.2
1979	····CCCCC···	MANUAL	370	JUN 20	0	JUL 19	24.3	JUN 20	52.7	---	---	---
1980	···CCCCCC···	MANUAL	130	JUN 02	0	MAY 18	202	JUN 04 *	531	---	---	---
1981	····CCCCC···	MANUAL	73	MAY 15	1	JUL 08	3.85	JUL 30	32.4	---	---	---
1982	···CCCCCCCP·	MANUAL	682	JUL 04 *	3	SEP 14	125	JUL 04	334	1.58	1.07	25.1
1983	···CCCCCCCP·	MANUAL	120	JUN 24	1	JUN 06	7.32	JUN 24	39.2	0.14	0.97	27.5
1984	··PCCCCCCC··	MANUAL	141	MAY 15	0	MAY 27	8.50	JUN 08	18.4	0.08	0.88	28.9
1985	···CCCCCCC··	MANUAL	170	JUN 24	0	APR 15	8.58	SEP 13	33.8	0.16	0.81	29.5
1988	····PCCCCC··	MANUAL	313	JUL 17	0	JUN 05	85.4	JUL 17	280	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

FIREBAG RIVER NEAR THE MOUTH - STATION NO. 07DC001

LOCATION: LAT 57 38 30 N LONG 111 10 30 W
DRAINAGE AREA: 5 880 km^2
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1988

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 08	16:30	5.0	81.3	10RB	DIP	55	133														
MAY 13	11:30		92.5	10RB	DIP	38	138														
AUG 22	13:45	16.0	26.0	10RB	DIP	3	168														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1988

ALBERTA

FIREBAG RIVER NEAR THE MOUTH - STATION NO. 07DC001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1976	-----PP-P-P-	MANUAL	12	JUN 12	3	NOV 02	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	71	APR 27	4	SEP 22	---	---	---	---	---	---
1978	---P-PPP----	MANUAL	313	APR 28 *	7	JUL 05	---	---	---	---	---	---
1979	----PPPPPP--	MANUAL	118	MAY 22	5	AUG 23	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	49	APR 23	4	OCT 26	---	---	---	---	---	---
1981	----P-PP----	MANUAL	32	JUL 15	2	AUG 30 *	---	---	---	---	---	---
1982	----PP-PP---	MANUAL	45	MAY 18	5	JUN 23	---	---	---	---	---	---
1983	---P-P-PP---	MANUAL	84	APR 28	2	SEP 15	---	---	---	---	---	---
1984	----P--PPP--	MANUAL	35	AUG 11	4	OCT 03	---	---	---	---	---	---
1985	---P-P-P----	MANUAL	241	APR 28	2	AUG 21	---	---	---	---	---	---
1986	----P--P----	MANUAL	55	MAY 08	3	AUG 22	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

FREEMAN RIVER NEAR FORT ASSINIBOINE - STATION NO. 07AH001

LOCATION: LAT 54 21 52 N LONG 114 54 13 W
DRAINAGE AREA: 1 660 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 07	17:20	3.0	41.0	MID	X	DH59	841	103	11	14	26	38	55	70	84	97	100			30	56	14
JUN 04	13:00		12.6	MID	X	DH48	55	116														
JUL 08	17:30		12.3	MID	X	DH48	17	133														
JUL 31	17:45	15.0	24.8	MID	X	DH59	86	121														
AUG 28	18:30	20.0	3.84	MID	X	DH48	2	172														
NOV 05	14:45	0.0	10.1	MID	X	DH48	49	139														

NOTE - SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1974	-------P--P--	MANUAL	1 200	JUL 15	5	OCT 29	---	---	---	---	---	---
1975	---PP-PPP---	MANUAL	781	APR 23	5	AUG 19	---	---	---	---	---	---
1976	---PPPPPP---	MANUAL	297	APR 21	8	JUN 23	---	---	---	---	---	---
1977	---PPP-PP---	MANUAL	455	APR 18	5	AUG 23	---	---	---	---	---	---
1978	---PPPPPP-P-	MANUAL	853	JUN 18	10	AUG 30	---	---	---	---	---	---
1979	----PPPPPP--	MANUAL	2 880	JUN 15 *	7	SEP 20	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	1 110	APR 15	9	OCT 19	---	---	---	---	---	---
1981	---PPPPPPP--	MANUAL	285	APR 23	3	SEP 08	---	---	---	---	---	---
1982	------PP-P-P-	MANUAL	114	JUL 02	5	JUN 24	---	---	---	---	---	---
1983	-------PPP---	MANUAL	589	JUL 05	7	AUG 30	---	---	---	---	---	---
1984	----PPP-P----	MANUAL	2 340	JUN 08	7	SEP 05	---	---	---	---	---	---
1985	----PPPPPP--	MANUAL	127	MAY 29	5	JUN 19	---	---	---	---	---	---
1986	----PPPP--P-	MANUAL	841	MAY 07	2	AUG 28 *	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

HARTLEY CREEK NEAR FORT MACKAY - STATION NO. 07DA009

LOCATION LAT 57 15 34 N LONG 111 27 53 W
DRAINAGE AREA 358 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1988

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002 .004 .008 .016 .031 .062 .125 .250 .500 1.00 2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
MAY 08	10:45	4.0	3.57	10LB	DIP	12	137				
MAY 13	12:05		4.57	10LB	DIP	13	159				
JUN 20	12:30	15.0	1.63	10LB	DIP	6	192				
AUG 25	09:25	9.0	0.741	10LB	DIP	2	196				

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1988

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1976	---PP-PPP-P-	MANUAL	58	APR 15		2	NOV 02		---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	39	APR 21		2	SEP 22		---	---	---	---	---	---
1978	---PPPPPP---	MANUAL	108	AUG 21	*	3	JUN 28		---	---	---	---	---	---
1979	---PPPPPPP--	MANUAL	40	MAY 03		8	JUN 26		---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	54	SEP 18		5	MAY 28		---	---	---	---	---	---
1981	-----P-PP----	MANUAL	12	AUG 29		4	MAY 28		---	---	---	---	---	---
1982	-----PP-P----	MANUAL	18	MAY 19		1	AUG 03	*	---	---	---	---	---	---
1983	---P-P-PP----	MANUAL	7	APR 27		2	AUG 05		---	---	---	---	---	---
1984	-----P--PP----	MANUAL	8	SEP 21		4	AUG 11		---	---	---	---	---	---
1985	---P-P-P-----	MANUAL	88	APR 30		6	JUN 18		---	---	---	---	---	---
1988	-----PP-P----	MANUAL	13	MAY 13		2	AUG 25		---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

HIGHWOOD RIVER NEAR THE MOUTH - STATION NO. 05BL024

LOCATION LAT 50 47 00 N LONG 113 49 13 W
DRAINAGE AREA 3 880 km²
TYPE OF FLOW REGULATED SINCE 1910
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1988

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
MAR 18	09:50	0.0	5.48	20.0	X	DIP	3	252														
MAY 07	11:45	8.5	24.3	25.0	X	DH59	32	234														
MAY 29	14:30	10.5	155	---	X	DH59	1010	158	13	19	38	52	75	91	97	100				8	72	19
JUN 23	10:40	16.5	26.6	16.0	X	DH59	8	195														
JUL 18	09:50	15.0	13.2	16.0	X	DH48	13	190														
AUG 26	13:30	17.0	5.82	19.0	X	DH48	2	212														
SEP 28	12:30	7.5	16.5	13.0	X	DH48	41	208														
NOV 05	13:30	3.5	13.9	20.0	X	DH48	2	248														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1988

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

ALBERTA

HIGHWOOD RIVER NEAR THE MOUTH - STATION NO. 05BL024

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1970	----CCCC----	MANUAL	8 870	JUN 14 *	0	AUG 26 *	254 000	JUN 14 *	380 000 *	---	---	---
1971	----------CCC	MANUAL	13	OCT 28	2	OCT 13	5.75	OCT 26	193	---	---	---
1972	CCCCCCCCCCCC	MANUAL	1 480	JUN 01	3	FEB 21	26 200	JUN 01	240 000	980	980	---
1973	CCCCCCCCCCCC	MANUAL	1 310	MAY 26	0	JAN 03	16 300	MAY 27	79 200	323	852	50.4
1974	CCCCCCCCCCCC	MANUAL	1 810	APR 30	0	SEP 04	25 800	JUN 17	321 000	1 310	871	33.3
1975	CCCCCCCCCCCC	MANUAL	3 010	JUN 20	0	SEP 29	76 900	JUN 20	217 000	887	875	23.4
1976	CCCCCCCCCCCC	MANUAL	327	MAY 11	0	DEC 14	7 810	AUG 08	30 400	124	725	30.2
1977	CCCCCCCCCCCC	MANUAL	700	APR 05	1	JUN 29	1 610	APR 05	5 580	22.3	606	35.1
1978	CCCCCCCCCCCC	MANUAL	1 020	JUN 05	2	SEP 24	13 400	JUN 08	102 000	415	580	31.6
1979	CCCCCCCCCCP-	MANUAL	836	MAY 24	0	JUL 13	7 980	MAY 27	49 100	200	533	31.0
1980	--CCCCCCCP-	MANUAL	1 350	JUN 03	4	NOV 05	15 300	JUN 03	103 000	421	520	28.1
1981	--PPPP-PPP--	MANUAL	1 340	MAY 21	3	SEP 28	---	---	---	---	---	---
1982	---PPPPPP---	MANUAL	170	JUN 14	3	JUL 28	---	---	---	---	---	---
1983	---PPPPP----	MANUAL	136	MAY 28	2	AUG 30	---	---	---	---	---	---
1984	----PP-PP---	MANUAL	37	MAY 30	3	MAY 02	---	---	---	---	---	---
1985	----PPPPPP--	MANUAL	83	MAY 24	3	OCT 28	---	---	---	---	---	---
1986	--P-PPPPP-P-	MANUAL	1 010	MAY 28	2	AUG 26	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

JOSLYN CREEK NEAR FORT MACKAY - STATION NO. 07DA018

LOCATION LAT 57 18 27 N LONG 111 44 30 W
DRAINAGE AREA 287 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 07	09 40	3.0	11.2	10LB	DIP	2510	157														
MAY 13	09 40	4.0	4.27	10LB	DIP	1180	176														
JUN 21	13 45	12.0	1.70	10LB	DIP	168	307														
AUG 23	12 00	11.0	0.123	10LB	DIP	39	321														

NOTE SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1976	---PP-PPP-P-	MANUAL	1 100	APR 15	37	NOV 04	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	142	MAY 04	11	SEP 19	---	---	---	---	---	---
1978	---PPPPPP---	MANUAL	2 380	MAY 01	13	AUG 22	---	---	---	---	---	---
1979	---PPPPPPP--	MANUAL	544	MAY 30	19	OCT 17	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	116	APR 24	6	JUN 24 *	---	---	---	---	---	---
1981	----P-PP----	MANUAL	254	MAY 25	8	AUG 28	---	---	---	---	---	---
1982	-----P-PP---	MANUAL	33	JUN 24	17	AUG 03	---	---	---	---	---	---
1983	---P-P-PP---	MANUAL	2 040	APR 26	17	SEP 14	---	---	---	---	---	---
1984	----P--PP---	MANUAL	154	MAY 22	49	SEP 22	---	---	---	---	---	---
1985	---P-P-P----	MANUAL	2 800	APR 29 *	33	AUG 20	---	---	---	---	---	---
1986	----PP-P----	MANUAL	2 510	MAY 07	39	AUG 23	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

KEG RIVER AT HIGHWAY NO. 35 - STATION NO. 07HF002

LOCATION: LAT 57 44 40 N LONG 117 37 30 W
DRAINAGE AREA: 887 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
MAY 05	11:00	3.5	9.29	14.0	X	DH59	896	139	16	28	46	68	93	97	98					3	71	26
MAY 26	10:50	13.0	2.57	5.5	X	DH48	127	234														
JUN 23	17:00	14.0	13.4	18.0	X	DH59	1570	219	22	29	46	59	78	86	92	98				14	57	29
JUN 27	14:20	15.0	4.39	5.5	X	DH48	229	234														
JUL 26	11:10	17.0	0.881	5.5	X	DH48	81	319														
AUG 29	12:00	15.0	0.309	4.5	X	DH48	48	338														
SEP 22	12:10	10.5	0.059	MID	X	DIP	45	367														
OCT 27	11:35	2.0	0.408	MID	X	DH48	38	320														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1974	---------PP--	MANUAL	24	SEP 19	17	OCT 31	---	---	---	---	---	---
1975	---PPPPPPP--	MANUAL	489	JUN 06	18	OCT 30	---	---	---	---	---	---
1976	---PPPPPPP--	MANUAL	1 040	JUN 28	21	SEP 30	---	---	---	---	---	---
1977	----PPP-PP--	MANUAL	809	JUN 13	23	OCT 25	---	---	---	---	---	---
1978	----PPPP-P--	MANUAL	2 050	MAY 23	34	OCT 27	---	---	---	---	---	---
1979	-----PPP--P-	MANUAL	3 850	JUN 28 *	16	NOV 02 *	---	---	---	---	---	---
1980	---PP-PP-----	MANUAL	184	APR 25	27	JUL 03	---	---	---	---	---	---
1981	----PP-P-----	MANUAL	738	MAY 04	27	JUN 29	---	---	---	---	---	---
1982	----P--P-P---	MANUAL	481	MAY 06	18	OCT 25	---	---	---	---	---	---
1983	----P-PPP----	MANUAL	111	MAY 08	40	AUG 11	---	---	---	---	---	---
1984	----PPPPPP--	MANUAL	1 270	MAY 22	45	AUG 27	---	---	---	---	---	---
1985	----PPPPP-P-	MANUAL	1 380	MAY 07	23	JUL 22	---	---	---	---	---	---
1986	----PPPPPP--	MANUAL	1 570	JUN 23	38	OCT 27	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ALBERTA

LESSER SLAVE RIVER AT HIGHWAY NO. 2A - STATION NO. 07BK005

SUSPENDED SEDIMENT FOR 1986

LOCATION: LAT 55 17 39 N LONG 114 35 26 W
DRAINAGE AREA: 14 400 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 89 700 TONNES FOR THE PERIOD MAR 26 TO OCT 31

REMARKS:

DAY	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	DAY
1	25.2 B			29.4	25	63.5	47.1	48	189	1
2	25.4 B			29.8	20	51.1	45.8	39 S	154	2
3	25.3 B			28.9	20	51.7	47.0	57	231	3
4	25.5 B			30.7	22	58.4	50.2	85 S	369	4
5	25.9 B			31.6	19	51.9	51.9	92	413	5
6	24.3 B			33.0	20	57.0	52.8	88 S	310	6
7	25.1 B			33.6	20	58.4	52.2	88	298	7
8	25.0 B			34.2	19 S	56.3	53.0	89 S	316	8
9	25.4 B			37.3	34	110	53.5	52	240	9
10	25.3 B			37.4	32	103	53.5	55 S	284	10
11	24.4 B			35.5	32 S	98.2	51.1	52	230	11
12	24.7 B			34.8	63 S	188	50.9	53 S	233	12
13	24.3 B			34.2	36 S	106	53.6	72	333	13
14	24.5 B			33.8	22 S	64.4	46.8	47 S	189	14
15	25.2 B			33.8	24 S	69.7	49.5	56	240	15
16	25.0 B			34.0	24	70.5	53.3	69	318	16
17	24.8 B			35.0	25	75.8	54.9	68	327	17
18	24.8 B			36.9	28 S	89.3	55.7	61	294	18
19	26.0 B			38.5	43 S	143	55.8	50	241	19
20	28.5 B			39.8	71 S	244	55.4	41 S	186	20
21	25.9 B			41.8	84 S	339	58.0	62	311	21
22	26.1 B			42.5	59 S	217	67.9	172 S	1 010	22
23	25.3 B			41.8	44	159	73.9	212 S	1 360	23
24	25.1 B			41.0	43	152	73.1	93 S	587	24
25	25.8 B			40.3	44 S	153	71.2	83 S	511	25
26	27.5 B	86 S	157	40.4	47	184	68.8	83 S	492	26
27	29.6 B	81	187	41.0	45	159	68.1	79 S	466	27
28	29.5	55	140	42.8	49	182	66.5	85 S	373	28
29	29.4	49	124	45.7	58	228	65.0	78 S	480	29
30	29.3	41	104	47.8	67 S	277	64.3	82 S	456	30
31	29.7	35	89.8				64.8	82 S	513	31
TOTAL	810.1		771.8	1 108.2		3 841.0	1 776.1		11 903	TOTAL

DAY	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	JUL DAILY DISCHARGE (m³/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m³/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	DAY
1	81.5	82 S	438	59.0	44	224	78.2	83 S	561	1
2	84.8	78 S	424	59.5	76	388	77.4	80 S	535	2
3	83.1	70 S	382	59.5	71	366	77.0	85 S	585	3
4	80.3	54 S	281	62.4	78	410	81.6	114 S	804	4
5	59.8	55 S	285	64.8	107	599	81.3	90 S	632	5
6	60.1	64 S	332	61.8	70	373	80.5	72 S	501	6
7	59.2	59 S	302	59.5	68	350	78.5	78 S	543	7
8	60.4	72 S	376	57.6	66	328	80.4	99 S	688	8
9	60.7	74	388	57.2	64	315	78.6	86	586	9
10	59.4	61	313	56.4	60	292	75.3	73	475	10
11	61.5	89	367	57.6	62	309	75.2	85 S	429	11
12	62.8	78	423	59.7	83	428	76.2	88 S	448	12
13	60.8	66	346	59.8	79	408	75.4	60 S	391	13
14	59.5	64	328	61.3	77	408	77.0	70 S	466	14
15	58.9	57	280	64.7	126	889	80.2	86	885	15
16	58.7	54 S	285	73.2	173	1 080	76.7	74 S	490	16
17	57.0	43 S	212	81.4	263 S	1 850	74.2	57 S	365	17
18	57.0	41 S	202	84.5	896 S	8 130	75.3	55 S	358	18
19	64.0	121 S	669	88.0	556 S	4 610	78.0	88 S	669	19
20	75.5	264 S	1 720	80.9	235 S	1 850	76.0	80 S	389	20
21	79.7	283	2 020	88.4	169 S	1 280	75.8	88 S	432	21
22	77.2	159	1 080	84.4	161 S	1 170	74.3	88 S	389	22
23	74.4	77 S	495	82.8	188	1 180	72.5	47	294	23
24	73.8	63	401	82.3	142	1 010	73.4	80	381	24
25	70.4	55	335	81.7	131 S	925	70.1	83 S	315	25
26	68.7	54	321	80.2	101 S	700	67.4	39 S	227	26
27	66.5	50	287	78.9	85 S	648	66.2	39 S	223	27
28	64.1	48	266	79.6	101 S	695	65.0	43 S	246	28
29	61.0	48	253	81.3	130 S	913	65.5	44	249	29
30	60.7	48	257	81.2	108 S	758	66.0	48	282	30
31				79.7	83 S	840	63.7	42	231	31
TOTAL	1 818.7		14 030	2 235.3		33 335	2 314.9		13 780	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

LESSER SLAVE RIVER AT HIGHWAY NO. 2A - STATION NO. 07BK006

SUSPENDED SEDIMENT FOR 1988

DAY	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	DAILY DISCHARGE (m^3/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	62.0	34	182	59.2	38	194				1
2	65.1	38 S	214	58.8	37 S	182				2
3	67.0	49	284	57.3	35	173				3
4	63.6	37 S	203	58.3	37	188				4
5	62.6	34	184	58.8	35	178				5
6	61.8	35	187	61.4	45	239				6
7	60.1	33	171	58.4	43	217				7
8	59.6	33 S	170	58.3	34	165				8
9	59.6	34	175	60.8	59	310				9
10	60.7	42	220	63.8	88 S	485				10
11	62.1	54	280	57.8	44 S	219				11
12	60.9	50	263	57.6	38	189				12
13	58.5	47	242	57.9	43 S	215				13
14	57.7	40 S	188	57.0	41 S	202				14
15	57.0	38	177	57.4	45	223				15
16	57.8	38	195	56.5	41	200				16
17	57.8	37	185	56.9	42	208				17
18	57.0	32	158	56.8	41	201				18
19	56.2	28	141	55.7	39	188				19
20	55.8	29	140	55.1	38	171				20
21	55.4	28	134	55.5	35	168				21
22	58.8	46	221	55.1	38 S	171				22
23	54.3	54 S	253	53.8	29	134				23
24	50.2	38 S	158	54.0	33	154				24
25	52.6	44	200	54.4	32 S	150				25
26	53.7	44	204	54.8	32	152				26
27	58.1	50	242	56.0	33	160				27
28	60.3	61	318	53.2	29 S	133				28
29	59.2	43	220	50.7	24	105				29
30	58.7	34 S	172	54.5	29	137				30
31				58.8	35	172				31
TOTAL	1 781.4		6 100	1 758.3		5 979				TOTAL

S - SAMPLE(S) COLLECTED THIS DAY

ALBERTA

LESSER SLAVE RIVER AT HIGHWAY NO. 2A - STATION NO. 07BK005

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 25	14 50	0.5	27.3	22.0	DH59	86	137														
APR 08	15 20	1.0	34.1	22.0	DH59	17	129														
APR 11	09 10	5.0	35.5	22.0	DH59	27	119														
APR 12	07 30	6.0	34.8	22.0	DH59	69															
APR 13	16 30	8.0	34.1	22.0	DH59	30															
APR 14	06 42	3.0	33.6	22.0	DH59	22															
APR 15	17 10	5.0	33.4	22.0	DH59	98															
APR 18	13 50	6.0	37.3	22.0	DH59	27	132														
APR 19	16 21	4.0	38.9	22.0	DH59	47															
APR 20	15 40	8.0	40.1	22.0	DH59	75															
APR 21	19 52	6.0	42.0	22.0	DH59	89															
APR 22	16 45	5.0	42.4	22.0	DH59	50	117														
APR 25	14 15	6.0	40.2	22.0	DH59	44															
APR 30	07 38	5.0	48.0	22.0	DH59	69															
MAY 02	09 42	5.0	45.8	22.0	DH59	39	118														
MAY 04	09 42	7.0	50.1	22.0	DH59	85															
MAY 06	09 53	7.0	53.1	22.0	DH59	69															
MAY 08	07 00	4.0	52.8	22.0	DH59	66															
MAY 10	08 00	3.0	54.4	22.0	DH59	57 C	89														
MAY 12	09 40	4.0	50.3	22.0	DH59	48															
MAY 14	09 40	7.0	46.7	22.0	DH59	50															
MAY 20	09 40	8.0	54.9	22.0	DH59	39	98														
MAY 22	18 00	7.0	70.3	22.0	DH59	213 C															
MAY 23	21 29	9.0	74.9	22.0	DH59	184 C	118														
MAY 24	09 05	9.0	73.1	22.0	DH59	85															
MAY 25	08 25	10.0	71.8	22.0	DH59	83															
MAY 26	09 15	12.0	68.8	22.0	DH59	83															
MAY 27	10 30	12.0	68.5	22.0	DH59	80	115														
MAY 28	09 55	13.0	66.8	22.0	DH59	82															
MAY 29	10 30	13.0	66.3	22.0	DH59	80															
MAY 30	10 13	14.0	63.3	22.0	DH59	78															
MAY 31	08 00	14.0	63.9	22.0	DH59	90	115														
JUN 01	09 00	14.0	60.5	22.0	DH59	85															
JUN 02	08 10	15.0	64.7	22.0	DH59	75															
JUN 03	09 32	15.0	62.9	22.0	DH59	69 C															
JUN 04	10 14	14.0	60.0	22.0	DH59	52	133														
JUN 05	10 00	14.0	59.7	22.0	DH59	55															
JUN 06	08 32	16.0	59.6	22.0	DH59	82 C															
JUN 07	08 10	16.0	59.5	22.0	DH59	59															
JUN 08	14 04	16.0	60.9	22.0	DH59	75 C	125														
JUN 16	08 03	15.0	56.8	22.0	DH59	57 C															
JUN 17	13 19	15.0	57.3	22.0	DH59	44 C															
JUN 18	08 22	15.0	56.9	22.0	DH59	40	120														
JUN 19	09 15	14.0	61.6	22.0	DH59	104															
JUN 20	09 05	12.0	76.1	22.0	DH59	273															
JUN 23	14 06	15.0	74.5	22.0	DH59	71															
JUL 17	09 10	14.0	81.2	22.0	DH59	188 C	104														
JUL 17	09 20	14.0	81.2	22.0	DH59	209 C															
JUL 18	11 15	13.0	85.5	22.0	DH59	1130	134	21	40	52	67	88	97	98	100				3	57	40
JUL 19	17 05	15.0	95.4	22.0	DH59	428	121	17	23	37	48	74	93	98	99	100			7	70	23
JUL 20	11 20	17.0	91.0	22.0	DH59	220															
JUL 21	20 45	19.5	85.2	22.0	DH59	159															
JUL 21	20 50	19.5	85.2	22.0	DH59	150	118														
JUL 22	19 45	20.0	84.7	22.0	DH59	184															
JUL 25	18 35	18.0	81.9	22.0	DH59	129															
JUL 26	19 40	18.5	79.6	22.0	DH59	94															
JUL 27	22 40	18.5	78.6	22.0	DH59	87															
JUL 28	17 25	18.0	80.9	22.0	DH59	150															
JUL 30	19 25	18.0	81.2	22.0	DH59	104															
JUL 31	14 50	18.0	78.7	22.0	DH59	93	131														
JUL 31	18 30	20.0	78.5	22.0	DH59	86	124														
AUG 01	18 25	21.0	78.0	22.0	DH59	82															
AUG 02	21 45	20.0	77.3	22.0	DH59	79															
AUG 03	17 35	21.0	77.2	22.0	DH59	92															
AUG 04	22 15	20.0	82.8	22.0	DH59	119															
AUG 05	17 35	19.0	81.0	22.0	DH59	81															
AUG 06	20 15	21.0	80.5	22.0	DH59	70	128														
AUG 07	22 05	21.0	79.4	22.0	DH59	89															
AUG 08	21 10	22.0	81.4	22.0	DH59	101															
AUG 11	19 45	20.0	75.8	22.0	DH59	85															
AUG 12	20 10	21.0	77.0	22.0	DH59	70															
AUG 13	17 25	20.0	75.2	22.0	DH59	55	121														
AUG 14	20 00	21.0	79.8	22.0	DH59	83															
AUG 16	21 25	17.0	75.3	22.0	DH59	66															
AUG 17	17 30	16.5	74.6	22.0	DH59	53															
AUG 18	17 30	18.0	75.1	22.0	DH59	56															
AUG 18	18 35	17.0	78.7	22.0	DH59	110															
AUG 20	17 25	16.5	74.2	22.0	DH59	46	121														
AUG 21	17 25	16.5	76.8	22.0	DH59	80															
AUG 22	18 55		74.3	22.0	DH59	52															
AUG 25	17 35	15.5	69.0	22.0	DH59	47															
AUG 26	17 25	16.0	67.0	22.0	DH59	37															
AUG 27	18 50	17.0	68.1	22.0	DH59	40	131														
AUG 28	17 30	17.0	65.8	22.0	DH59	44															
SEP 02	17 30	16.0	66.0	22.0	DH59	38															
SEP 04	18 20	15.0	63.0	22.0	DH59	34	128														
SEP 08	21 35	15.0	59.5	22.0	DH59	33															
SEP 14	15:45	14.5	57.1	22.0	DH59	38	125														
SEP 23	18 10	11.5	51.8	22.0	DH59	46															
SEP 24	16:00	12.0	50.5	22.0	DH59	38	128														
SEP 30	20:00	10.0	54.6	22.0	DH59	33															
OCT 02	18:20	8.0	55.1	22.0	DH59	31															
OCT 10	18:45	7.0	51.6	22.0	DH59	62	128														
OCT 11	17:05	7.0	57.4	22.0	DH59	35															
OCT 13	16:00	8.0	57.8	22.0	DH59	44															
OCT 14	15:05	8.0	57.5	22.0	DH59	40	122														
OCT 22	18:30	8.0	55.1	22.0	DH59	36															
OCT 25	17:30	7.0	54.1	22.0	DH59	29															
OCT 28	16:20	5.5	51.9	22.0	DH59	28	121														

NOTE - SINGLE VERTICAL LOCATED AT 26.0 METRES FOR 1986

CONCENTRATION SYMBOL(S) C - COARSE MATERIAL PRESENT

LESSER SLAVE RIVER AT HIGHWAY NO. 2A - STATION NO. 07BK006

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY APR-OCT MEAN LOAD (TONNES)	SUMMARY APR-OCT HISTORICAL MEAN LOAD (TONNES)	SUMMARY APR-OCT STANDARD ERROR OF MEAN %
1977	---PPPPPPP--	MANUAL	185	APR 12	31	JUL 19	---	---	---	---	---	---
1978	-----PP-P---	MANUAL	70	JUL 05	39	SEP 05	---	---	---	---	---	---
1980	---PPP-PPP--	MANUAL	77	APR 15	16	OCT 28	---	---	---	---	---	---
1981	--PCCCCCCC--	MANUAL	111	JUL 06	15	SEP 30	529	JUL 06	34 300	180	180	---
1982	-----P-P----	MANUAL	39	AUG 05	23	AUG 31	---	---	---	---	---	---
1983	---PCCCCCC--	MANUAL	284	JUN 25	14	MAY 08 *	4 070	JUN 28	88 800	---	---	---
1984	--PCCCCCCP--	MANUAL	523	JUN 8	16	MAR 22	4 030	JUN 08	72 500	---	---	---
1985	--PCCCCCCC--	MANUAL	434	JUN 25	17	MAR 28	2 280	JUN 25	82 700	292	226	29.2
1986	--PCCCCCCC--	MANUAL	1 130	JUL 18 *	17	APR 08	8 130	JUL 18 *	89 700 *	416	289	25.8

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

LITTLE PADDLE RIVER NEAR MAYERTHORPE - STATION NO. 07BB005

LOCATION: LAT 53 57 51 N LONG 115 10 29 W
DRAINAGE AREA: 298 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
APR 09	09:10	2.0	4.59	MID	X DH48	247	138														
MAY 08	17:00	6.0	2.01	MID	X DH48	77	189														
JUN 03	18:45	10.0	0.804	MID	X DH48	25	240														
JUL 15	12:50	18.0	2.94	MID	X DH48	354	227	43	83	90	94	98	98	99	100				2	29	69
AUG 01	08:35	15.0	0.470	MID	X DH48	40	246														
AUG 28	15:00	17.0	0.002 E	MID	X DIP	8	282														
NOV 08	08:00	0.0	0.328	MID	X DH48	23	241														

NOTE SINGLE VERTICAL IS UNDETERMINED FOR 1986

DISCHARGE SYMBOL(S) E - ESTIMATED
VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1974	-------PPPP--	MANUAL	94	JUL 14	11	SEP 25	---	---	---	---	---	---
1975	---PPPPPP---	MANUAL	154	APR 30	11	JUN 17	---	---	---	---	---	---
1976	---PPPPP----	MANUAL	350	APR 13	6	AUG 10 *	---	---	---	---	---	---
1977	---PPP-PP---	MANUAL	434	MAY 30	14	JUN 22	---	---	---	---	---	---
1978	---PPPPPPP--	MANUAL	1 080	JUN 15 *	17	OCT 30	---	---	---	---	---	---
1979	---PPPPPPP--	MANUAL	595	APR 30	13	AUG 20	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	705	APR 15	21	OCT 14	---	---	---	---	---	---
1981	----PPPPPP--	MANUAL	35	MAY 18	10	JUL 06	---	---	---	---	---	---
1982	-------PPPP--	MANUAL	513	JUL 05	19	AUG 31	---	---	---	---	---	---
1983	-----P-------	MANUAL	185	JUN 28	185	JUN 28	---	---	---	---	---	---
1984	-----P-------	MANUAL	512	JUN 09	512	JUN 09	---	---	---	---	---	---
1985	----PPPPPP--	MANUAL	49	AUG 15	14	SEP 12	---	---	---	---	---	---
1986	---PPPPP--P-	MANUAL	354	JUL 15	8	AUG 28	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

LOVETT RIVER NEAR THE MOUTH - STATION NO. 07BA003

LOCATION LAT 52 59 50 N LONG 115 38 20 W
DRAINAGE AREA 101 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 28	11 50	11.0	2.49	3.5 K	DH48	67	105														
JUN 26	10 50	10.0	0.949	2.0 K	DH48	12	189														
JUL 21	09 30	13.0	9.82	MID K	DH48	415	104														
AUG 27	12 40	10.0	0.934	2.0 K	DH48	6	215														
SEP 24	13 05	6.0	0.706	4.0 K	DH48	7	217														

NOTE SINGLE VERTICAL IS UNDETERMINED FOR 1986

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1976	---PPPPPPP--	MANUAL	203	JUN 16	8	SEP 08	---	---	---	---	---	---
1977	---PPPPPP---	MANUAL	124	MAY 09	19	JUL 12	---	---	---	---	---	---
1978	-----PPPPP-P-	MANUAL	18	JUN 21	4	SEP 27	---	---	---	---	---	---
1979	-----PPPPPP--	MANUAL	35	MAY 22	3	AUG 15 *	---	---	---	---	---	---
1980	---PPPPP-P---	MANUAL	328	JUN 24	8	OCT 28	---	---	---	---	---	---
1982	----PPPPPP--	MANUAL	580	JUL 06 *	9	SEP 21	---	---	---	---	---	---
1986	----PPPPP---	MANUAL	415	JUL 21	6	AUG 27	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

MACKAY RIVER NEAR FORT MACKAY - STATION NO. 07DB001

LOCATION LAT 57 12 38 N LONG 111 41 36 W
DRAINAGE AREA 5 570 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 07	14 15	5.0	51.1	10LB K	DIP	313 C	157														
JUN 21	09 40	14.0	12.0	10LB K	DIP	36	211														
AUG 23	08 20	11.0	8.79	10LB K	DIP	8	221														

NOTE SINGLE VERTICAL IS UNDETERMINED FOR 1986

CONCENTRATION SYMBOL(S) C - COARSE MATERIAL PRESENT

MACKAY RIVER NEAR FORT MACKAY - STATION NO. 07DB001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1975	-----PP--P--	MANUAL	353	JUL 20	27	OCT 08	---	---	---	---	---	---
1976	---PP-PPP-P-	MANUAL	898	APR 10	7	AUG 05	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	157	APR 21	4	AUG 22	---	---	---	---	---	---
1979	----PPPPPP--	MANUAL	714	MAY 02 *	4	AUG 22	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	38	SEP 19	5	MAY 22	---	---	---	---	---	---
1981	-----P-PP----	MANUAL	13	MAY 28	1	AUG 28 *	---	---	---	---	---	---
1982	-----PP-PP---	MANUAL	82	MAY 24	2	SEP 16	---	---	---	---	---	---
1983	---P-P-PP---	MANUAL	108	APR 26	3	SEP 17	---	---	---	---	---	---
1984	-----P--PP---	MANUAL	57	MAY 24	5	SEP 22	---	---	---	---	---	---
1985	---P-P-P-----	MANUAL	290	APR 29	7	AUG 20	---	---	---	---	---	---
1986	-----PP-P-----	MANUAL	313	MAY 07	8	AUG 23	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

MCLEOD RIVER ABOVE EMBARRAS RIVER - STATION NO. 07AF002

LOCATION: LAT 53 28 12 N LONG 116 37 45 W
DRAINAGE AREA: 2 560 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE VERTICAL SAMPLING (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
MAY 27	17:40	14.0	82.9	37.0 K	DH59	924	142														
JUL 08	11:20		47.7	32.0 K	DH59	51	181														
JUL 19	12:40	10.0	458	30.0 K	DH59	1940	150	11	17	29	38	58	72	83	97				28	55	17
JUL 29	11:55	11.0	88.4	38.0 K	DH59	87	184														
SEP 08	10:40	9.0	17.1	31.0 K	DH48	3	201														
OCT 07	11:45	7.0	76.1	38.0 K	DH59	127	180														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

MCLEOD RIVER NEAR WHITECOURT - STATION NO. 07AG004

LOCATION: LAT 54 00 45 N LONG 115 50 18 W
DRAINAGE AREA: 9 100 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE VERTICAL SAMPLING (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
MAY 07	11:00	2.0	130	MID X	DH59	157	144														
JUN 04	18:20		88.1	MID X	DH48	24	160														
JUL 31	07:50	15.0	205	MID X	DH59	87	159														
AUG 28	12:00	15.0	26.8	MID X	DH59	2	211														
NOV 05	07:30	1.0	42.4	MID X	DH59	2	202														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

ALBERTA

MCLEOD RIVER NEAR WHITECOURT - STATION NO. 07AG004

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MEAN LOAD (TONNES)	SUMMARY : HISTORICAL MEAN LOAD (TONNES)	SUMMARY : STANDARD ERROR OF MEAN %
1975	---PPPPPP---	MANUAL	27	APR 21	3	SEP 22	150	APR 21 *	---	---	---	---
1977	---PPP-PP---	MANUAL	1 240	MAY 31	12	APR 20	---	---	---	---	---	---
1978	---PPPPPPP--	MANUAL	878	JUN 18	3	AUG 28	---	---	---	---	---	---
1979	----PPPPPP--	MANUAL	287	MAY 01	0	AUG 22 *	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	1 850	JUN 07 *	5	OCT 15	---	---	---	---	---	---
1981	---PPPPPPP--	MANUAL	32	MAY 19	3	SEP 08	---	---	---	---	---	---
1982	------PP-P---	MANUAL	1 470	JUL 07	5	JUN 22	---	---	---	---	---	---
1983	-----PPPP----	MANUAL	115	JUL 08	2	AUG 31	---	---	---	---	---	---
1984	----P-P------	MANUAL	300	MAY 02	54	JUL 24	---	---	---	---	---	---
1985	-----PPPPP---	MANUAL	18	AUG 13	4	JUL 18	---	---	---	---	---	---
1986	----PPPP--P-	MANUAL	197	MAY 07	2	AUG 28	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

MIDDLE FORK CREEK NEAR SEEBE - STATION NO. 05BF017

LOCATION: LAT 50 57 34 N LONG 115 10 16 W
DRAINAGE AREA: 2.85 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL		TYPE OF SAMPLER		INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 28	14:30	3.0	0.606	H	MID	X	DIP		332	92	19	22	41	58	77	90	98	99	100			10	68	22
MAY 28	15:15	3.0	0.606	H	MID	X	DIP		396	93	9	13	28	42	64	78	87	98	100			22	65	13

NOTE - SINGLE VERTICAL IS UNDETERMINED FOR 1986

DISCHARGE SYMBOL(S): H - DAILY MEAN
VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MAR-OCT MEAN LOAD (TONNES)	SUMMARY : MAR-OCT HISTORICAL MEAN LOAD (TONNES)	SUMMARY : MAR-OCT STANDARD ERROR OF MEAN %
1969	CCCCCCCCCCCC	MANUAL	31	APR 08	0	APR 29 *	0.51	MAY 25	7.56	0.03	0.03	---
1970	CCCCCCCCCCCC	MANUAL	33	JUN 04	0	FEB 02	0.75	JUN 17	8.05	0.03	0.03	0.0
1971	CCCCCCCCCCCC	MANUAL	12	JUN 07	0	AUG 04	0.85	JUN 08	5.53	0.02	0.03	13.6
1972	CCCCCCCCCCCC	MANUAL	33	JUN 01	0	JUL 10	1.37	JUN 01	10.3	0.04	0.03	13.6
1973	CCCCCCCCCCCC	MANUAL	17	JUN 22	0	FEB 20	0.51	JUN 23	5.51	0.02	0.03	12.9
1974	CCCCCCCCCCCC	MANUAL	90	JUN 17	0	DEC 10	5.40	JUN 17 *	22.1 *	---	---	---
1975	C---CCCCCCCC	MANUAL	5	JUN 23	0	JAN 08	0.11	JUN 24	1.45	---	---	---
1976	CCCCCCCCCCC	MANUAL	8	JUN 16	0	JUN 02	0.10	JUN 20	3.28	0.01	0.03	18.1
1977	CCCCCCCCCCC	MANUAL	4	JUN 01	0	APR 26	0.08	AUG 14	1.12	0	0.02	25.8
1978	---CCCCCCCC	MANUAL	30	JUN 09	0	MAY 11	1.03	JUN 05	8.41	---	---	---
1979	CCCCCCCCCP-	MANUAL	8	JUN 04	0	JAN 19	0.52	MAY 28	2.87	0.01	0.02	33.1
1980	--CCCCCCC--	MANUAL	27	SEP 17	0	APR 09	0.52	JUN 11	5.44	0.02	0.02	20.4
1981	---CCCCCC--	MANUAL	29	MAY 26	1	MAY 17	1.33	MAY 26	10.3	---	---	---
1982	-----CCCC---	MANUAL	34	JUN 12	0	JUL 27	1.48	JUN 13	7.31	---	---	---
1983	-----PCCC---	MANUAL	4	MAY 25	1	MAY 30	0.09	MAY 25	1.96	---	---	---
1986	----P-------	MANUAL	396	MAY 28 *	332	MAY 28	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

MILK RIVER AT MILK RIVER - STATION NO. 11AA005

LOCATION: LAT 49 08 37 N LONG 112 04 44 W
DRAINAGE AREA: 2 720 km²
TYPE OF FLOW: REGULATED SINCE 1918
TYPE OF GAUGE: RECORDING

INTERNATIONAL GAUGING STATION

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 11	10:30	3.0	4.92	30.0	X	DH48	51	270														
MAR 27	10:10	5.0	3.34	9.0	X	DH48	35	282														
APR 08	14:40	10.0	9.85	7.0	X	DH48	114	193														
APR 29	08:10	5.0	11.3	8.0	X	DH48	60	186														
MAY 28	09:30	20.5	8.80	---		X DH48	25	174														
JUN 24	08:45	17.0	18.3	18.0	X	DH48	295	109	23	28	50	69	85	94	97	100				5	65	28
JUL 15	09:45	15.0	17.2	13.0	X	DH48	84	98														
JUL 29	09:30	18.0	14.3	12.0	X	DH48	42	89														
AUG 27	09:10	16.0	16.7	12.0	X	DH48	40	85														
SEP 28	15:55	7.0	1.55	11.0	X	DH48	4	292														
OCT 30	08:05	4.0	0.804	4.4	X	DH48	5	341														

NOTE - SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1974	----PPPPPP--	MANUAL	582	MAY 08	3	OCT 17	---	---	---	---	---	---
1975	-PPPPPPPPP--	MANUAL	5 130	JUN 21 *	8	APR 15	---	---	---	---	---	---
1976	--PPPPPPPP--	MANUAL	786	MAY 11	14	OCT 13	---	---	---	---	---	---
1981	--CCCCCCCCP-	MANUAL	831	MAR 11	7	NOV 02	3 690	MAY 17	80 500	369	369	---
1982	--CCCCCCCCP-	MANUAL	4 070	APR 14	2	SEP 08 *	39 400	APR 14 *	129 000 *	526	448	17.5
1983	--PPPPPPPP--	MANUAL	3 300	JUN 15	3	SEP 13	---	---	---	---	---	---
1984	--PPPP-P-P--	MANUAL	434	MAY 30	5	OCT 31	---	---	---	---	---	---
1985	--PPPPPP-PP-	MANUAL	1 480	APR 03	5	NOV 05	---	---	---	---	---	---
1986	--PPPPPPPP--	MANUAL	298	JUN 24	4	SEP 28	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

MUSKEG RIVER NEAR FORT MACKAY - STATION NO. 07DA005

LOCATION: LAT 57 11 30 N LONG 111 34 05 W
DRAINAGE AREA: 1 480 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 08	10:15	4.0	13.2	10LB	X	DIP	10	123														
JUN 20	14:00	14.0	6.18	10LB	X	DIP	5	208														
AUG 23	07:00	11.0	3.08	10LB	X	DIP	3	229														

NOTE - SINGLE VERTICAL IS UNDETERMINED FOR 1985

ALBERTA

MUSKEG RIVER NEAR FORT MACKAY - STATION NO. 07DA002

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1976	---PP-PPP-P-	MANUAL	41	APR 11	3	AUG 03 *	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	28	APR 20	3	AUG 25	---	---	---	---	---	---
1978	---PPPPPP---	MANUAL	15	APR 24	3	JUN 26	---	---	---	---	---	---
1979	----PPPPPP--	MANUAL	13	MAY 02	5	MAY 30	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	18	APR 24	5	OCT 26	---	---	---	---	---	---
1981	----P-PP----	MANUAL	8	JUL 15	3	MAY 27	---	---	---	---	---	---
1982	----PP-PP---	MANUAL	8	MAY 19	4	JUN 25	---	---	---	---	---	---
1983	---P-P-PP---	MANUAL	11	APR 27	3	AUG 07	---	---	---	---	---	---
1984	----P--PP---	MANUAL	58	SEP 21 *	5	AUG 11	---	---	---	---	---	---
1985	---P-P-P----	MANUAL	20	APR 30	6	AUG 21	---	---	---	---	---	---
1986	----PP-P----	MANUAL	10	MAY 09	3	AUG 23	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

NORTH SASKATCHEWAN RIVER AT EDMONTON - STATION NO. 05DF001

LOCATION LAT 53 32 15 N LONG 113 29 04 W
DRAINAGE AREA 28 000 km²
TYPE OF FLOW REGULATED SINCE 1950
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
APR 01	09:45	0.0	225	116		DH59	85	176														
APR 15	09:05	0.0	282	73.0	X	DH59	254	188														
MAY 13	09:30	11.0	318	121	X	DH59	126	204														
JUN 10	09:00	17.0	354	116		DH59	122	189														
JUL 08	09:30	16.0	413	121	X	DH59	111	180														
AUG 13	11:00	21.0	257	116		DH59	77	231														
SEP 16	09:30	8.5	179	126	X	DH59	6	200														
OCT 21	09:15	5.0	158	116		DH59	12	227														
NOV 04	08:50	3.0	149	126	X	DH59	9	224														

NOTE - SINGLE VERTICAL LOCATED AT 116 METRES FOR 1986

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1974	------P-----	MANUAL	1 580	JUL 13	220	JUL 16	---	---	---	---	---	---
1975	----P-PPP---	MANUAL	87	MAY 15	3	SEP 23 *	---	---	---	---	---	---
1976	---P-PP-----	MANUAL	143	APR 09	34	JUL 22	---	---	---	---	---	---
1977	----PPP-P---	MANUAL	2 480	MAY 30 *	25	SEP 29	---	---	---	---	---	---
1978	---PPPPPP-P-	MANUAL	777	JUN 08	7	AUG 31	---	---	---	---	---	---
1979	---PPPPPP-P-	MANUAL	400	APR 27	7	AUG 23	---	---	---	---	---	---
1980	-----PPPP---	MANUAL	142	JUN 02	28	SEP 26	---	---	---	---	---	---
1981	----PP------	MANUAL	287	MAY 28	84	MAY 07	---	---	---	---	---	---
1982	----PPPPPP--	MANUAL	1 580	JUL 07	11	AUG 10	---	---	---	---	---	---
1983	---P-PPPP-P-	MANUAL	398	APR 25	8	AUG 31	---	---	---	---	---	---
1984	---PPPPP-P--	MANUAL	251	JUN 13	6	OCT 03	---	---	---	---	---	---
1985	---PP--PP---	MANUAL	214	APR 07	11	AUG 05	---	---	---	---	---	---
1986	---PPPPPPPP-	MANUAL	254	APR 15	8	SEP 16	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

NORTH SASKATCHEWAN RIVER AT WHIRLPOOL POINT - STATION NO. 05DA009

LOCATION: LAT 52 00 05 N LONG 118 28 10 W
DRAINAGE AREA: 1 920 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JUN 19	10:40	7.0	239	9.0	D49	290	129														
JUL 31	10:30	8.0	108	9.0	D49	37	101														
AUG 28	11:20	11.0	128	9.0	D49	98	91														

NOTE - SINGLE VERTICAL LOCATED AT 4.5 METRES FOR 1986

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY APR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1972	-----CCCCCCCC	DUAL	374 JUN 12		9 NOV 27		20 300 JUN 11	*	257 000	---	---	---
1973	CCCCCCCCCCCC	DUAL	929 MAY 19	*	0 NOV 20	*	30 200 JUN 24		278 000	* 1 300	1 300	---
1974	CCCCCCCCCCCC	DUAL	580 JUL 18		1 NOV 27		13 400 JUN 17		258 000	1 210	1 280	3.8
1975	CCCCCCCCCCCC	DUAL	570 JUL 13		0 JAN 15		14 100 JUL 13		280 000	1 170	1 230	3.1
1976	CCCCPCCCCCCC	DUAL	271 AUG 25		2 FEB 24		5 840 AUG 04		185 000	---	---	---
1977	CCCCCCCCCCCC	MANUAL	808 JUN 08		1 NOV 15		10 000 JUN 08		137 000	637	1 080	13.9
1978	CCCCCCCCCCCC	MANUAL	486 SEP 04		1 JAN 09		9 090 JUL 27		280 000	1 220	1 110	10.8
1979	P--CCCCCCCP-	MANUAL	903 JUN 01		2 JAN 15		10 300 MAY 27		228 000	1 070	1 100	8.9
1980	---CCCCCC---	MANUAL	784 JUL 23		5 SEP 27		15 100 JUL 23		209 000	---	---	---
1981	----CCCCCC--	MANUAL	437 JUL 29		5 MAY 05		10 800 JUL 29		257 000	---	---	---
1982	-----PPPPP--	MANUAL	128 JUL 27		7 OCT 19		---	---	---	---	---	---
1983	---PPPPPPP--	MANUAL	241 MAY 31		2 OCT 18		---	---	---	---	---	---
1984	---PPPPPP---	MANUAL	238 JUL 31		0 APR 30		---	---	---	---	---	---
1985	----PP-PP---	MANUAL	154 AUG 01		13 SEP 28		---	---	---	---	---	---
1986	-----PPP----	MANUAL	290 JUN 19		37 JUL 31		---	---	---	---	---	---

DUAL - MANUAL AND AUTOMATIC SAMPLING MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

NOTIKEWIN RIVER AT MANNING - STATION NO. 07HC001

LOCATION: LAT 58 55 10 N LONG 117 37 05 W
DRAINAGE AREA: 4 880 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: MANUAL

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 28	12:30	4.5	25.7	MID	DH59	282 C	130														
MAY 06	11:25	5.0	94.8	30.0 X	DH59	2810	172	16	19	30	40	58	77	88	97				23	58	19
MAY 22	11:50	9.5	41.7	28.0 X	DH59	145	156														
JUN 24	08:55	16.5	4.58	28.0 X	DH59	5	227														
JUL 30	08:40	16.5	12.5	MID	DH59	17	177														
AUG 26	09:30	13.0	3.02	MID	DH48	4	227														
SEP 24	11:10	8.5	0.921	4.2 X	DH48	3	288														

NOTE - SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

ALBERTA

NOTIKEWIN RIVER AT MANNING - STATION NO. 07HC001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			SAMPLED CONCENTRATION MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1974	---------P-P-	MANUAL	61	SEP 18		8	NOV 01		---	---	---	---	---	---
1975	---PPPPPPP--	MANUAL	611	APR 28		4	AUG 11		---	---	---	---	---	---
1976	---PPPPP-P--	MANUAL	2 530	JUN 29		13	OCT 01		---	---	---	---	---	---
1977	---P-PP-PP--	MANUAL	291	APR 18		13	JUL 28		---	---	---	---	---	---
1978	----P-PP-P---	MANUAL	3 400	MAY 25		6	AUG 31		---	---	---	---	---	---
1979	-----PPPPPP--	MANUAL	2 080	MAY 11		9	OCT 25		---	---	---	---	---	---
1980	---P--PPP---	MANUAL	183	SEP 26		18	SEP 03		---	---	---	---	---	---
1981	----PPPPPP--	MANUAL	84	MAY 25		9	OCT 28		---	---	---	---	---	---
1982	----PPPP----	MANUAL	1 850	MAY 03		2	JUL 23	*	---	---	---	---	---	---
1983	----PP-PP---	MANUAL	3 680	JUN 21	*	7	SEP 01		---	---	---	---	---	---
1984	---PPP-P----	MANUAL	993	MAY 28		8	AUG 02		---	---	---	---	---	---
1985	----PPPP-P--	MANUAL	830	MAY 08		3	AUG 27		---	---	---	---	---	---
1986	---PPPPPP---	MANUAL	2 810	MAY 08		3	SEP 24		---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

OLDMAN RIVER NEAR BROCKET - STATION NO. 05AA024

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 33 27 N LONG 113 49 20 W
DRAINAGE AREA: 4 600 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 196 000 TONNES FOR THE PERIOD MAR 01 TO NOV 03

REMARKS:

	MAR			APR			MAY			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	71.5	38	235	49.3	34	145	57.2	11 S	54.4	1
2	66.5	37	213	46.4	19	88.7	55.8	4	19.3	2
3	59.4	36	185	41.3	8	28.5	51.5	3	47.6	3
4	54.1	36	168	40.5	7	24.5	46.0	45	334	4
5	48.6	32	134	39.0	7	23.8	105	124 S	1 180	5
6	43.8	27	102	38.0	6	19.7	104	114	1 020	6
7	39.7	23	78.9	39.3	8	27.2	97.8	52 S	439	7
8	46.8	33	133	41.7	9	32.4	84.8	41	336	8
9	44.9	36	140	48.2	15 S	62.5	94.0	38 S	309	9
10	39.8	33	113	55.7	57	274	95.8	42	348	10
11	38.4	34 S	107	57.8	57	285	84.3	41	334	11
12	33.8	31	80.5	52.3	23	104	89.6	32	248	12
13	32.3	30	83.7	47.0	18	73.1	88.1	17	129	13
14	30.1	28	72.8	45.6	21	82.7	90.7	31	243	14
15	28.3	28	73.4	46.1	22	87.8	85.9	18	134	15
16	28.8	28	89.9	45.1	28 S	97.4	86.6	23	172	16
17	27.5	23	54.6	43.6	21	78.1	87.3	30	228	17
18	25.0	18	38.9	40.8	22	77.7	87.0	23	173	18
19	24.8	18	40.7	38.6	20	66.7	86.6	183	1 610	19
20	24.6	15	32.1	39.1	14	47.3	128	532	5 790	20
21	26.1	14	31.6	45.9	104	412	173	676 S	10 100	21
22	29.2	18	45.4	72.0	480	2 900	218	700	13 200	22
23	27.4	15	35.5	130	607 S	6 820	187	268 S	4 650	23
24	26.4	12	27.4	104	280	2 250	187	219	3 180	24
25	25.7	9 S	20.0	92.8	70 S	561	188	212	3 040	25
26	24.4	7	14.8	83.7	53	383	209	451	8 140	26
27	25.1	32	69.4	76.6	42	278	272	1 090 S	25 800	27
28	37.1	88	314	71.3	31	191	313	851 S	23 000	28
29	52.7	103	469	65.8	21 S	119	332	881 S	27 800	29
30	55.2	114	544	61.4	17	90.2	309	512 S	13 700	30
31	57.9	71	355				291	382 S	9 880	31
TOTAL	1 195.0		4 091.8	1 699.0		15 708.8	4 431.2		196 178.8	TOTAL

	JUN			JUL			AUG			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	287	257	5 830	46.2	6	24.0	15.4	6 S	8.50	1
2	252	198 S	4 310	42.7	6 S	22.1	15.8	7	9.62	2
3	225	142 S	2 780	41.2	4	14.2	15.1	8	10.4	3
4	187	89	1 440	40.8	5	17.6	15.5	11	14.7	4
5	169	72 S	1 050	41.5	6	21.6	15.1	12	15.7	5
6	167	48	893	38.4	5	15.8	15.3	13	17.2	6
7	185	54	770	35.3	6	18.3	14.8	13 S	18.4	7
8	152	51	670	33.0	5	14.3	14.2	10	12.3	8
9	144	40 S	493	32.9	7 S	19.9	14.4	7	8.71	9
10	131	14	158	30.1	6	15.6	14.0	6	7.26	10
11	122	17	178	28.5	5	12.3	13.7	5	5.92	11
12	119	22 S	222	27.9	5	12.1	13.8	3	3.58	12
13	108	15	137	27.0	5	11.7	14.2	3	3.88	13
14	100	13	112	26.9	5	11.2	14.4	5	6.22	14
15	101	15	140	24.6	4	8.50	13.3	3	3.45	15
16	96.2	12 S	98.7	24.2	4	8.36	12.6	2	2.18	16
17	87.2	10	75.3	25.8	7	15.7	12.8	3	3.27	17
18	83.0	9	64.5	26.2	7 S	15.8	12.4	3	3.21	18
19	81.6	9	63.5	24.0	6	12.4	11.7	2	2.02	19
20	76.2	9 S	58.5	22.8	7	13.8	11.8	4	4.08	20
21	86.0	11	84.8	21.8	8	15.1	11.8	4	4.11	21
22	81.6	8 S	62.6	21.3	10	18.4	11.6	4 S	4.01	22
23	57.7	10	49.9	21.8	13	24.3	11.0	3	2.85	23
24	55.2	7 S	33.4	22.0	15	28.5	10.9	3	2.83	24
25	56.1	8 S	38.1	21.7	16	30.0	10.9	3	2.83	25
26	52.8	7	31.8	20.6	17 S	30.3	10.8	3	2.80	26
27	50.2	8	26.0	20.8	17	30.3	10.5	2	1.81	27
28	48.1	8	24.9	20.4	13	22.8	10.3	3	2.67	28
29	50.4	8	34.8	18.9	10	16.3	9.93	3	2.69	29
30	50.5	8	34.9	17.6	8	13.2	11.6	5	5.01	30
31				16.9	6	8.75	14.6	15	18.9	31
TOTAL	3 376.8		18 810.5	862.7		543.02	405.08		208.81	TOTAL

S - SAMPLE(S) COLLECTED THIS DAY

ALBERTA

OLDMAN RIVER NEAR BROCKET - STATION NO. 05AA024

SUSPENDED SEDIMENT FOR 1985

DAY	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DAY
1	15.7	9	12.2							
2	12.4	4	4.29	23.5	48 S	97.5	21.3			
3	11.8	4 S	4.11	25.4	21	46.1	21.9	3	5.62	1
4	11.8	4	4.08	24.0	7	14.5	23.7	10	18.9	2
5	12.4	3	3.27	23.1	5	9.98	22.8	18 S	32.8	3
				24.9	7	15.1	23.4			4
6	13.3	3	3.45							5
7	12.4	3	3.21	27.3	10	23.6	23.7			
8	12.2	2	2.11	31.1	14	37.6	21.7			6
9	13.5	3	3.50	36.1	17	53.0	18.8 B			7
10	14.4	4	4.98	37.5	15	48.6	10.0 B			8
				36.8	10	33.4	9.20 B			9
11	13.6	2	2.35							10
12	13.8	2	2.40	36.8	5 E	18.1	8.50 B			
13	13.8	3	3.80	35.2	5	15.2	5.80 B			11
14	14.6	2	2.52	34.2	4	11.8	5.10 B			12
15	14.1	2	2.44	32.6	3	8.45	5.10 B			13
				30.9	3	8.01	5.50 B			14
16	14.6	3 S	3.78							15
17	14.2	3	3.68	28.8	3	7.67	8.00 B			
18	15.0	5	5.48	28.8	3 S	7.46	7.00 B			16
19	17.0	5	5.81	27.8	3	7.18	10.0 B			17
20	18.8	3	4.35	27.2	3	7.05	15.0 B			18
				26.0	3	6.74	17.0 B			19
21	18.6	3	4.30							20
22	18.7	3	4.07	25.0	3	6.48	18.3 B			
23	18.2	3	3.84	24.2	3 S	8.27	17.9 B			21
24	15.3	4	5.29	23.7	3	8.14	18.6 B			22
25	17.5	9	13.6	23.1	2	3.99	18.7 B			23
				22.5	2	3.89	28.5 B			24
26	22.8	18	31.2							25
27	22.8	10	19.5	22.3	1	1.93	28.5 B			
28	20.8	5	8.99	22.2	1	1.92	18.5 B			26
29	19.0	3	4.92	23.6	1	2.04	14.0 B			27
30	18.8	7 S	11.4	23.4	1	2.02	11.5 B			28
31				24.2	2	4.18	9.50 B			29
				25.0	2	4.32				30
TOTAL	462.0		192.82	859.6		521.19	452.90		57.22	31 TOTAL

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT DISCHARGE (m^3/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
MAR 11	14:30	4.0	35.1	48.0	D49	33															
MAR 26	10:20	5.0	25.4	48.0	D49	9															
APR 09	11:00		50.1	48.0	D49	16	175														
APR 16	12:05		45.7	48.0	D49	28															
APR 23	11:30		138	48.0	D49	537	144	5	10	31	32	50	88	80	95	100			34	55	10
APR 25	13:30		92.8	48.0	D49	82															
APR 29	10:30		67.0	48.0	D49	21															
MAY 01	11:45		57.5	48.0	D49	13	168														
MAY 06	17:00		103	48.0	D49	115															
MAY 07	11:00		98.2	48.0	D49	53															
MAY 09	14:00		85.0	48.0	D49	41	178														
MAY 21	12:15		188	48.0	D49	582	143														
MAY 23	10:45	5.0	180	48.0	D49	276	130														
MAY 27	15:00	14.0	277	48.0	D49	1130	123														
MAY 28	19:30	13.0	311	48.0	D49	684															
MAY 29	11:15	12.0	358	48.0	D49	1140	139	5	11	19	30	48	82	75	93	100			38	51	11
MAY 28	18:15	13.0	323	48.0	D49	697															
MAY 30	18:00	13.0	282	48.0	D49	447															
MAY 31	11:30	10.0	287	48.0	D49	430															
JUN 02	11:30	10.0	257	48.0	D49	212															
JUN 03	17:30		213	48.0	D49	128															
JUN 05	11:50	10.0	171	48.0	D49	75	128														
JUN 05	17:00	12.0	188	48.0	D49	83	141														
JUN 09	11:30	10.0	165	48.0	D45	45															
JUN 12	11:30	12.0	118	48.0	D49	27	183														
JUN 16	11:30	13.0	95.7	48.0	D49	17															
JUN 20	14:30	14.0	74.4	48.0	D49	5	187														
JUN 22	15:00	15.0	61.3	48.0	D49	5															
JUN 24	10:15	15.0	55.3	48.0	D49	7															
JUN 25	15:00	20.0	58.0	48.0	D49	5	172														
JUL 02	20:00	18.0	41.8	48.0	D49	5	181														
JUL 09	15:30	18.0	33.0	48.0	D49	7	183														
JUL 18	19:30	19.0	25.5	48.0	D49	5	181														
JUL 26	14:00	18.0	20.3	48.0	D49	18	202														
AUG 01	12:00	18.0	18.4	48.0	D49	5	202														
AUG 07	10:45	13.0	14.7	48.0	D49	14	201														
AUG 22	15:00	18.0	11.9	48.0	D49	4	212														
SEP 03	15:00	15.0	12.0	48.0	D49	4	201														
SEP 16	11:30	10.0	14.8	48.0	D49	3	208														
SEP 30	12:30	10.0	18.4	48.0	D49	5															
OCT 01	15:25	7.0	24.4	48.0	D49	81	184														
OCT 11	13:00	7.0	38.7	48.0	D49	8	176														
OCT 17	15:00	10.0	28.7	48.0	D49	3															
OCT 22	18:00	8.0	24.0	48.0	D49	3	184														
NOV 03	18:15	4.0	24.8	48.0	D49	18	203														

NOTE : SINGLE VERTICAL LOCATED AT 48 METRES FOR 1985

OLDMAN RIVER NEAR BROCKET - STATION NO. 05AA024

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1966	----CCCCCCCC	MANUAL	330	JUN 05	1	OCT 10	7 190	JUN 05	81 900	---	---	---
1967	CCCCCCCCCCCC	MANUAL	2 500	MAY 31	3	JAN 11	137 000	MAY 31	903 000	3 680	3 880	---
1968	CCCCCCCCCCCC	MANUAL	949	MAY 23	1	JAN 08	24 400	MAY 23	77 700	311	2 000	84 2
1969	CCCCCCCCCCCC	MANUAL	1 830	JUN 26	0 *	SEP 15 *	73 800	JUN 26	248 000	1 010	1 870	61 5
1970	CCCCCCCCCCCC	MANUAL	972	JUN 14	0	OCT 22	28 500	JUN 14	127 000	517	1 380	55 6
1971	CCCCCCCCCCCC	MANUAL	540	MAY 06	1	SEP 21	12 700	MAY 28	131 000	530	1 210	51 9
1972	CCCCCCCCCCCC	MANUAL	1 720	MAY 31	0	OCT 27	94 500	JUN 01	883 000	2 790	1 470	39 2
1973	CCCCCCCCCCCC	MANUAL	531	MAY 18	0	OCT 31	8 920	MAY 18	42 800	172	1 280	40 4
1974	CCCCCCCCCCCC	MANUAL	987	MAY 08	2	SEP 25	23 900	JUN 17	277 000	1 130	1 270	35 8
1975	CCCCCCCCCCCC	MANUAL	5 560 *	JUN 20 *	0	FEB 23	586 000	JUN 20 *	1 110 000 *	4 500	1 830	32 8
1976	CCCCCCCCCCCC	MANUAL	2 130	AUG 08	1	SEP 28	49 500	AUG 08	177 000	718	1 540	31 7
1977	CCCCCCCCCCCC	MANUAL	108	APR 07	3	JAN 05	283	APR 09	8 930	27 P	1 400	33 0
1978	CCCCCCCCCCCC	MANUAL	1 220	MAY 15	2	FEB 14	20 000	MAY 15	222 000	905	1 380	31 2
1979	CCCCCCCCCC--	MANUAL	367	MAY 25	1	SEP 01	8 510	MAY 27	88 100	358	1 280	31 1
1980	--CCCCCCCCP-	MANUAL	644	MAY 27	4	NOV 03	13 900	MAY 27	78 100	323	1 210	31 0
1981	--CCCCCCCC--	MANUAL	1 700	MAY 22	4	OCT 27	70 100	MAY 22	408 000	1 650	1 240	28 2
1982	---CCCCCC---	MANUAL	483	MAY 28	4	AUG 30	7 240	MAY 28	55 600	---	---	---
1983	--CCCCCCCC--	MANUAL	241	MAY 27	2	SEP 20	3 980	MAY 28	34 200	140	1 170	28 8
1984	--PCCCCCCC--	MANUAL	148	MAY 17	1	AUG 29	1 320	MAY 18	15 700	---	---	---
1985	---CCCCCC--	MANUAL	288	SEP 13	3	JUL 30	2 220	SEP 13	28 800	---	---	---
1986	--CCCCCCCP-	MANUAL	1 140	MAY 29	3	SEP 15	27 800	MAY 29	195 000	801	1 150	27 4

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ALBERTA

OLDMAN RIVER NEAR LETHBRIDGE - STATION NO. 05AD007

SUSPENDED SEDIMENT FOR 1986

LOCATION: LAT 49 42 30 N LONG 112 52 30 W
DRAINAGE AREA: 17 000 km²
TYPE OF FLOW: REGULATED SINCE 1910
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 735 000 TONNES FOR THE PERIOD MAR 01 TO NOV 05

REMARKS:

DAY	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	DAY
1	180	108 E	1 700	93.0	48 S	370	85.7	23 S	172	1
2	169	108 E	1 580	90.7	37 S	290	79.6	16	110	2
3	153	105 S	1 390	88.3	29	221	72.1	18 S	99.7	3
4	142	103	1 260	86.1	24 S	178	86.1	22	128	4
5	133	99	1 140	83.4	20	144	92.4	38 S	303	5
6	119	92	945	81.9	18 S	127	121	68	711	6
7	111	88	844	80.1	18	125	130	110 S	1 240	7
8	105	83	753	79.9	19 S	131	141	150 S	1 830	8
9	108	80	748	80.2	21	146	137	127 S	1 500	9
10	108	85	793	77.6	18 S	127	135	101 S	1 180	10
11	103	84	748	86.5	23	172	134	88 S	1 020	11
12	98.0	81	685	86.6	27 S	226	132	78 S	880	12
13	93.5	79	638	87.9	24	203	127	108 S	1 180	13
14	90.2	78 S	608	93.8	19 S	154	127	343	3 780	14
15	87.1	74 S	557	82.5	17	136	145	807 S	7 800	15
16	85.1	71	522	89.3	15 S	118	147	483 S	6 130	16
17	86.0	70 S	520	82.7	16	114	146	271 S	3 420	17
18	82.0	65	461	77.2	19 S	127	148	193	2 430	18
19	78.3	55 S	372	70.5	22	134	148	169	2 130	19
20	74.9	49	317	87.5	28 S	139	153	148 S	2 800	20
21	74.2	50 S	321	94.9	49	232	170	388	5 410	21
22	72.3	54	337	56.3	104	508	238	888 S	18 200	22
23	74.5	59 S	380	74.4	274	1 760	309	1 630	43 500	23
24	74.7	64	413	139	500 S	6 000	289	1 480	36 200	24
25	88.2	62 S	365	133	247 S	2 840	278	869 S	18 000	25
26	83.9	51	282	123	108 S	1 180	272	642	15 100	26
27	81.4	35 S	186	114	71 S	699	326	1 020	28 700	27
28	80.3	28	151	107	57	527	407	1 480 S	52 000	28
29	84.4	46 S	267	101	48 S	419	466	1 890 S	76 100	29
30	80.0	55	380	84.0	38	282	481	1 970 S	81 900	30
31	88.2	49 S	373				471	1 870 S	88 000	31
TOTAL	2 988.2		20 036	2 882.5		17 816	8 178.9		481 451.7	TOTAL

DAY	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	JUL DAILY DISCHARGE (m³/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m³/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	DAY
1	473	1 200 S	49 000	33.4	8 S	26.0	4.28	10 S	3.70	1
2	465	833 S	37 500	30.2	5 S	13.0	4.48	9	3.48	2
3	455	817 S	32 100	27.4	7 S	16.6	5.33	4 S	1.84	3
4	418	808 S	21 800	24.4	8 S	12.6	5.24	8	2.72	4
5	388	871 S	18 100	24.2	9 S	18.8	5.81	7 S	3.81	5
6	343	907 S	15 000	24.9	10 S	21.5	5.83	8	3.97	6
7	314	388 S	8 710	25.1	7 S	15.2	5.00	5 S	2.16	7
8	292	284 S	7 420	22.2	8 S	15.3	4.36	5	1.88	8
9	270	264 S	5 830	18.3	5 S	8.34	4.92	8 S	2.65	9
10	215	181 S	3 550	17.3	5 S	7.47	4.76	5	2.47	10
11	171	216 S	3 190	16.1	3 S	4.17	4.87	5 S	2.15	11
12	158	155 S	2 090	13.8	3 S	3.58	5.60	3	1.45	12
13	147	85 S	1 080	12.0	4 S	4.15	5.59	3	1.45	13
14	130	73 S	820	11.1 A	3 S	3.88	6.34	5 S	2.74	14
15	119	82 S	837	11.4 A	3 S	3.95	5.71	5	2.47	15
16	118	50 S	501	10.1	4	3.49	5.40	3 S	1.40	16
17	109	37 S	348	9.48	5 S	4.81	5.28	2	0.91	17
18	89.5	38 S	294	8.51	7	5.15	4.59	2	0.79	18
19	87.0	42 S	316	8.45	7 S	5.11	4.11	3	1.07	19
20	78.3	29 S	196	9.35	5	4.04	4.46	4 S	1.54	20
21	86.4	15 S	86.1	8.08	3 S	2.09	5.03	5	2.17	21
22	59.6	10 S	51.5	7.85	4	2.71	5.34	8	2.77	22
23	54.2	7 S	32.8	7.23	5 S	3.12	5.59	8	2.90	23
24	47.3	6 S	24.5	6.51	5 S	2.81	5.82	5 S	2.58	24
25	42.4	5 S	18.3	6.08	5	2.18	6.13	7	3.71	25
26	38.8	6 S	20.0	5.15	4 S	1.78	6.36	8	4.40	26
27	34.5	5 S	14.9	5.16	4	1.79	6.28	7	3.80	27
28	32.5	9 S	25.3	4.55	4 S	1.57	6.29	5 S	2.72	28
29	32.8	18 S	45.5	4.08	4	1.41	5.81	4	2.01	29
30	33.1	14 S	40.0	4.12	4 S	1.42	5.77	8 S	3.81	30
31				4.08	5	1.78	6.68	7	4.04	31
TOTAL	5 274.3		310 840.9	420.81		217.89	168.34		77.94	TOTAL

A - MANUAL GAUGE

E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

OLDMAN RIVER NEAR LETHBRIDGE - STATION NO. 05AD007

SUSPENDED SEDIMENT FOR 1986

DAY	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DAY
1	7.25	8	5.01	26.9	9	20.8	53.6	31	144	1
2	7.69	7	4.85	31.1	10	28.8	51.7	29	130	2
3	7.56	6 S	3.92	36.7	15	50.2	51.8	27	120	3
4	7.67	6	3.88	39.0	12 S	40.4	50.6	23	101	4
5	7.58	6	3.93	39.6	10	34.2	48.1	20	83.1	5
6	7.74	5	3.34	40.2	10	34.7	45.6	16 S	63.0	6
7	7.84	5 S	3.30	41.7	11 S	39.8	45.7			7
8	7.16	4	2.47	45.0	18	70.0	26.9 E			8
9	7.87	4	2.85	50.3	22	95.8	16.4 E			9
10	7.85	5	3.30	53.2	23 S	108	14.5 E			10
11	8.44	7 S	5.10	54.8	21	99.4	13.5 E			11
12	11.1	10	9.59	54.5	19	89.5	12.0 E			12
13	13.7	5 S	5.92	52.5	16	72.6	11.0 E			13
14	13.3	4	4.60	49.8	13 S	55.9	11.0 E			14
15	13.7	7	8.29	50.1	13	56.3	11.8 E			15
16	15.8	18	25.9	53.2	14	64.4	13.0 E			16
17	16.0	37 S	51.1	52.9	15	68.6	15.8 E			17
18	16.1	35	48.7	54.1	18 S	84.1	18.0 E			18
19	16.4	24	34.0	54.4	20	94.0	21.0 E			19
20	16.1	14	21.9	52.6	23	105	25.3 E			20
21	20.5	7 S	12.4	52.8	26	119	27.0 E			21
22	20.1	8	10.4	54.3	29 S	136	31.5 E			22
23	19.3	9	15.0	53.6	32	148	35.0 E			23
24	18.3	30	47.4	53.0	34	156	38.0 E			24
25	23.9	60 S	124	51.6	38	160	39.0 E			25
26	25.6	48	106	51.0	36 S	159	36.0 E			26
27	26.8	31	71.8	50.9	33	145	38.5 E			27
28	30.3	16 S	41.9	49.8	30 S	129	35.0 E			28
29	29.8	10	25.7	48.9	28	123	33.5 E			29
30	28.2	9 S	21.8	53.9	30	140	32.0 E			30
31				54.1	31 S	145				31
TOTAL	461.05		728.15	1 508.5		2 858.3	902.5		641.1	TOTAL

ALBERTA

OLDMAN RIVER NEAR LETHBRIDGE - STATION NO. 05AD007

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1988

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR	03 17:20	2.0	148		126	DH59	404	C	203														
MAR	14 09:35	4.0	90.7		126	DH59	78																
MAR	15 09:45	4.0	87.9		126	DH59	76		192														
MAR	17 16:10	5.0	86.8		126	DH59	70																
MAR	19 09:10	5.0	78.7		126	DH59	58																
MAR	21 10:50	9.0	74.4		127	DH59	49		201														
MAR	23 17:45	8.0	75.3		126	DH59	60																
MAR	25 16:50	8.0	66.6		126	DH59	82																
MAR	27 09:15	8.0	61.2		126	DH59	30																
MAR	27 10:30	8.0	61.3		126	DH59	44		238														
MAR	29 10:10	10.0	60.9		126	DH59	49																
MAR	31 14:35	8.0	87.6		126	DH59	48																
APR	01 16:30	9.0	95.1		126	DH59	48		188														
APR	02 15:00	9.0	90.9		126	DH59	38																
APR	04 10:15	9.0	86.6		126	DH59	24																
APR	06 10:00	9.0	81.8		126	DH59	18																
APR	08 09:00	9.0	79.1		126	DH59	19		188														
APR	10 09:20	9.0	74.4		126	DH59	17																
APR	12 11:40	3.0	97.5		126	DH59	27		194														
APR	14 15:15	9.0	93.8		126	DH59	18																
APR	16 09:20	7.0	87.7		126	DH59	15																
APR	18 09:45	8.0	77.8		126	DH59	19																
APR	20 08:50	11.0	57.3		126	DH59	25		184														
APR	24 11:52	12.0	141		126	DH59	564		187														
APR	25 08:58	10.0	134		126	DH59	221																
APR	26 10:00	10.0	126		126	DH59	111																
APR	27 08:40	10.0	115		126	DH59	71																
APR	28 10:10	9.0	100		126	DH59	50		173														
MAY	01 09:00	8.0	87.8		126	DH59	24																
MAY	01 16:30	8.0	88.5		126	DH59	21																
MAY	03 09:40	11.0	74.1		126	DH59	15																
MAY	05 12:15	8.0	83.6		126	DH59	33																
MAY	07 09:20	10.0	127		126	DH59	102																
MAY	08 08:05	10.0	143		126	DH59	155		183														
MAY	09 08:35	12.0	137		126	DH59	127																
MAY	10 09:25	11.0	134		126	DH59	102	C															
MAY	11 08:40	9.0	133		126	DH59	80																
MAY	12 08:55	9.0	133		126	DH59	75																
MAY	13 09:10	10.0	128		126	DH59	80																
MAY	15 09:45	5.0	148		126	DH59	838		178	14	19	29	40	64	88	98	100			12	69	19
MAY	16 08:10	8.0	145		126	DH59	528	C	156														
MAY	17 07:45	10.0	147		126	DH59	272	C															
MAY	20 10:10	15.0	151		126	DH59	168	C															
MAY	22 13:15	11.0	232		126	DH59	884	C	150														
MAY	25 08:05	14.0	279		126	DH59	889		147														
MAY	28 17:40	18.0	414		126	DH59	1580		138	12	18	28	37	55	74	91	99	100		25	58	18
MAY	29 11:15	18.0	462		126	DH59	1860		166	12	17	26	39	58	78	91	99	100		24	59	17
MAY	30 09:00	15.0	483		126	DH59	2040		178	8	15	22	35	55	74	85	97	100		28	59	13
MAY	31 08:40	17.0	474		126	DH59	1780		141	12	15	25	34	53	72	88	98	100		28	57	15
JUN	01 10:05	18.0	478		126	DH59	1200		151	11	14	27	37	56	77	85	97	100		29	57	14
JUN	02 08:40	17.0	468		126	DH59	835																
JUN	03 10:10	17.0	482		126	DH59	844																
JUN	04 09:00	15.0	417		126	DH59	596																
JUN	05 17:25	18.0	381		126	DH59	578																
JUN	06 10:40	15.0	334		126	DH59	528																
JUN	07 10:15	15.0	313		126	DH59	355	C	142														
JUN	08 11:45	17.0	294		126	DH59	287																
JUN	09 10:45	17.0	271		126	DH59	246																
JUN	10 09:35	17.0	218		126	DH59	183																
JUN	10 15:30	18.0	206		126	DH59	212		143														
JUN	11 11:45	18.0	171		126	DH59	151																
JUN	12 09:05	17.0	157		126	DH59	120																
JUN	13 09:45	14.0	152		126	DH59	85																
JUN	14 08:20	16.0	132		126	DH59	75																
JUN	15 11:30	12.0	118		126	DH59	63																
JUN	16 09:15	16.0	115		126	DH59	51																
JUN	17 09:15	18.0	113		126	DH59	37		170														
JUN	18 09:20	20.0	85.0		126	DH59	37																
JUN	18 09:00	17.0	88.3		126	DH59	43																
JUN	20 08:25		80.7		126	DH59	31																
JUN	21 10:00	15.0	87.0		126	DH59	14																
JUN	22 09:55	17.0	58.5		126	DH59	10																
JUN	23 09:25	19.0	55.5		126	DH59	7																
JUN	24 13:30	20.0	46.8		126	DH59	6		198														
JUN	25 10:55	22.0	42.0		126	DH59	5																
JUN	26 09:15	18.0	38.9		126	DH59	6																
JUN	27 10:45	19.0	34.4		126	DH59	5		218														
JUN	28 10:20	22.0	33.0		126	DH59	7																
JUN	29 10:00	21.0	33.1		126	DH59	19																
JUN	30 09:05	19.0	31.8		126	DH59	8																
JUN	30 18:10	19.0	33.3		126	DH59	28																
JUL	01 09:30	18.0	34.0		126	DH59	8																
JUL	02 12:30	22.0	30.1		126	DH59	5																
JUL	03 09:30	18.0	28.1		126	DH59	7																
JUL	04 09:10	18.0	24.3		126	DH59	8		223														
JUL	05 09:20	14.0	23.6		126	DH59	8																
JUL	06 07:20	14.0	24.6		126	DH59	12																
JUL	07 09:15	15.0	25.7		126	DH59	6																
JUL	08 20:40	18.0	20.8		126	DH59	8																
JUL	09 09:05	21.0	19.4		126	DH59	4																
JUL	10 09:05	20.0	17.4		126	DH59	8																
JUL	11 09:10	19.0	16.8		126	DH59	3		287														
JUL	12 09:20	18.0	14.1		126	DH59	3																
JUL	13 10:05	18.0	12.2		126	DH59	4																
JUL	14 09:00	18.0	11.1	A	126	DH59	3																
JUL	15 09:05	19.0	11.4	A	126	DH59	3																
JUL	17 09:25	12.0	9.99		126	DH59	8																
JUL	18 09:30	18.0	8.41		126	DH59	7		284														
JUL	21 09:15	20.0	8.13		126	DH59	3																
JUL	23 09:38	20.0	8.89		126	DH59	5																
JUL	24 08:50	19.0	8.84		126	DH59	5																
JUL	28 17:30	21.0	8.32		126	DH59	4		274														

NOTE : SINGLE VERTICAL LOCATED AT 126 METRES FOR 1988

DISCHARGE SYMBOL(S): A - MANUAL GAUGE

CONCENTRATION SYMBOL(S): C - ORGANIC MATERIAL PRESENT C - COARSE MATERIAL PRESENT

CONTINUED

OLDMAN RIVER NEAR LETHBRIDGE - STATION NO. 05AD007 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JUL 29	15:30	22.0	4.60	126	DH59	4															
JUL 30	09:40	17.0	4.54	126	DH59	4															
AUG 01	09:35	18.0	4.18	126	DH59	8	293														
AUG 01	13:00	18.0	4.28	40.0 K	DIP	13	262														
AUG 03	10:00	20.0	5.35	126	DH59	4															
AUG 05	10:10	20.0	5.49	126	DH59	7															
AUG 07	09:55	20.0	4.88	126	DH59	5	287														
AUG 09	08:55	20.0	4.73	126	DH59	6															
AUG 11	08:05	23.0	5.00	126	DH59	5															
AUG 14	09:50	25.0	5.86	126	DH59	5	242														
AUG 18	12:10	20.0	5.41	126	DH59	3															
AUG 20	11:20	18.0	4.81	126	DH59	4															
AUG 24	09:50	17.0	5.79	126	DH59	5															
AUG 28	13:55	21.0	8.50	126	DH59	8	240														
AUG 28	16:50	23.0	8.45	19.0 K	DIP	4															
AUG 30	10:55	21.0	8.89	126	DH59	8															
SEP 03	15:00	18.0	7.59	126	DH59	8	219														
SEP 07	09:55	12.0	7.80	126	DH59	4															
SEP 11	09:50	12.0	8.24	126	DH59	8	253														
SEP 13	09:35	9.0	13.9	126	DH59	5															
SEP 17	09:55	10.0	15.8	126	DH59	38	250														
SEP 17	10:00	10.0	15.8	126	DH59	90	264														
SEP 21	10:30	10.0	20.6	126	DH59	7															
SEP 25	14:15	8.0	25.8	126	DH59	64	218														
SEP 28	13:10	11.0	30.8	126	DH59	14															
SEP 30	11:50	10.0	28.3	126	DH59	9															
OCT 04	13:45	12.0	38.4	126	DH59	12	247														
OCT 07	10:15	12.0	41.7	126	DH59	10															
OCT 10	09:00	8.0	52.9	126	DH59	23															
OCT 14	08:35	8.0	49.6	126	DH59	13	203														
OCT 18	12:10	12.0	53.9	126	DH59	18															
OCT 22	10:00	7.0	55.0	126	DH59	29	188														
OCT 26	10:05	10.0	51.2	126	DH59	36															
OCT 28	15:55	9.0	49.8	126	DH59	29	185														
OCT 31	13:45	5.0	54.1	126	DH59	32	189														
NOV 05	10:50	4.0	45.2	126	DH59	18	200														

NOTE : SINGLE VERTICAL LOCATED AT 126 METRES FOR 1986

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)		SUMMARY MAR-OCT MEAN LOAD (TONNES)	SUMMARY MAR-OCT HISTORICAL MEAN LOAD (TONNES)	SUMMARY MAR-OCT STANDARD ERROR OF MEAN %
1972	--CCCCCCCCCC	DUAL	2 310	JUN 02	5	NOV 05	173 000	JUN 02	3 180 000		13 000	13 000	---
1973	CCCCCCCCCCCC	DUAL	750	MAY 19	2	JAN 08 *	19 700	MAY 20	159 000		841	6 820	90 9
1974	CCCCCCCCCCCC	DUAL	1 750	JUN 18	4	OCT 02	103 000	JUN 18	1 710 000		8 870	8 870	51 9
1975	CCCCCCCCCCCC	DUAL	7 880	JUN 21 *	4	AUG 26	1 880 000	JUN 21 *	5 780 000	*	22 500	11 000	44 2
1976	CCCCCCCCCCCC	MANUAL	1 380	MAY 11	3	SEP 23	90 100	AUG 07	735 000		2 980	9 420	43 5
1977	CCCCCCCCCCCC	MANUAL	106	JUN 13	3	JAN 08	416	JUN 11	11 500		40 8	7 880	47 0
1978	CCCCCCCCCCCC	MANUAL	3 840	MAY 19	5	JAN 24	112 000	MAY 19	1 340 000		5 480	7 510	41 8
1979	CCCCCCCCCC--	MANUAL	2 290	MAY 28	8	AUG 01	103 000	MAY 28	944 000		3 850	7 080	38 0
1980	--CCCCCCCP-	MANUAL	5 880	MAY 27	7	AUG 27	416 000	MAY 27	1 010 000		4 100	6 730	36 5
1981	--CCCCCCCC-	MANUAL	4 870	MAY 23	5	SEP 07	488 000	MAY 23	2 490 000		10 100	7 080	31 4
1982	--CCCCCCCP-	MANUAL	1 430	MAY 29	4	MAR 08	33 800	MAY 29	508 000		2 070	6 810	31 1
1983	--CCCCCCC--	MANUAL	973	MAY 28	8	APR 12	22 400	MAY 28	134 000		548	6 100	31 9
1984	--CCCCCCCP-	MANUAL	304	JUN 01	8	APR 01	2 250	JUN 01	24 200		88 3	5 640	32 8
1985	---CCCCCC--	MANUAL	1 170	SEP 14	4	AUG 29	11 600	MAY 27	184 000		---	---	---
1986	--CCCCCCCP-	MANUAL	2 040	MAY 30	3	JUL 11	81 900	MAY 30	735 000		3 000	5 450	31 8

DUAL - MANUAL AND AUTOMATIC SAMPLING MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ALBERTA

OLDMAN RIVER NEAR WALDRON'S CORNER - STATION NO. 05AA023

SUSPENDED SEDIMENT FOR 1986

LOCATION LAT 49 45 50 N LONG 114 11 00 W
DRAINAGE AREA 1 440 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 33 500 TONNES FOR THE PERIOD MAR 28 TO NOV 04

REMARKS

DAY	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	DAY
1	6.80 B									
2	6.50 B			7.88	2	1.36	13.5	5 S	5.83	1
3	6.30 B			7.18	2	1.24	13.5	8	7.00	2
4	6.00 B			6.32	4	2.18	16.3	14	22.1	3
5	5.70 B			5.86	5	2.88	28.7	23 S	71.9	4
				5.87	6	3.66	29.5	22 S	56.1	5
6	5.40 B									
7	5.40 B			7.02	5	3.03	29.1	17 S	42.7	6
8	5.80 B			7.80	5	3.37	28.5	14	32.1	7
9	5.50 B			9.56	5	4.13	27.2	12	28.2	8
10	5.30 B			13.7	7	8.29	28.1	11 S	26.7	9
				16.1	8	11.1	28.7	10	24.8	10
11	5.10 B									
12	4.95 B			13.4	8	9.26	27.2	7 S	16.5	11
13	4.80 B			10.6	5	4.58	25.4	6	13.2	12
14	4.50 B			9.21	6	4.77	25.2	7	15.2	13
15	4.35 B			9.67	5	4.18	24.0	7	14.5	14
				8.51	4	2.94	22.3	7 S	13.5	15
16	4.10 B									
17	4.05 B			8.46	4	2.92	21.7	5	9.37	16
18	3.72			8.14	5	3.52	23.2	6	10.0	17
19	4.04			7.86	5	3.31	28.1	11	24.8	18
20	4.12			7.56	5	3.27	34.3	26	77.1	19
				9.12	8 S	4.73	51.0	155 S	687	20
21	4.81									
22	4.83			15.2	40	52.5	88.3	519 S	3 870	21
23	4.40			39.5	132 S	450	90.2	199 S	1 550	22
24	4.55			41.3	70 S	280	65.8	81 S	347	23
25	4.16			28.3	22 S	53.8	57.0	38	187	24
				24.0	18	37.3	64.8	37 S	207	25
26	4.19	2 S	0.72							
27	5.33	4	1.84	20.8	16 S	28.8	98.0	88	559	26
28	10.9	14	13.2	18.6	11	17.7	124	212	2 280	27
29	15.2	16	21.0	17.7	9	13.8	138	488 S	5 820	28
30	12.1	8	8.38	15.9	8 S	8.24	137	505 S	5 980	29
31	9.88	2	1.65	14.6	5	8.31	125	332 S	3 480	30
							118	212 S	2 120	31
TOTAL	182.32		46.78	417.32		1 003.07	1 825.4		27 598.80	TOTAL

DAY	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	JUL DAILY DISCHARGE (m³/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m³/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	DAY
1	106	155 S	1 420							
2	98.1	112 S	948	14.2	3 S	3.88	8.53	2	1.13	1
3	84.3	84	612	13.1	2	2.26	8.30	2	1.09	2
4	70.2	59 S	358	13.3	3	3.45	8.20	2	1.07	3
5	62.1	41	220	14.1	6	7.31	8.15	2	1.06	4
				13.8	8 S	7.15	8.07	2	1.05	5
6	57.3	32 S	158							
7	55.0	28 S	133	12.4	4	4.29	8.20	3	1.81	6
8	52.4	26 S	118	11.4	3	2.95	5.81	3	1.51	7
9	49.0	24 S	102	11.2	2 S	1.94	5.68	3	1.47	8
10	44.8	21 S	80.9	11.7	2	2.02	5.96	3	1.54	9
				10.5	2	1.81	5.67	3	1.47	10
11	43.2	18 S	89.7							
12	40.6	15 S	82.6	10.1	2	1.75	5.83	3 S	1.51	11
13	35.8	16 S	49.5	10.0	2	1.73	5.72	3	1.48	12
14	32.8	13	37.0	9.45	2	1.63	5.38	3	1.65	13
15	34.8	14 S	42.2	9.07	2	1.57	5.95	3	1.64	14
				8.81	2	1.48	5.54	3	1.44	15
16	31.3	12	32.5							
17	28.2	11 S	26.8	8.72	2	1.51	5.33	3	1.38	16
18	28.1	9 S	21.8	10.3	3	2.67	5.25	3	1.36	17
19	27.1	8	18.7	8.08	2	1.57	5.10	3	1.32	18
20	24.1	7 S	14.8	8.40	2	1.45	5.00	3	1.30	19
				8.05	2	1.39	5.08	3	1.32	20
21	21.8	5	9.42							
22	19.6	4	6.77	7.78	2	1.35	4.98	3	1.29	21
23	18.5	3 S	4.80	7.53	2	1.30	4.83	3	1.26	22
24	18.4	4 S	8.38	7.47	2	1.29	4.87	3	1.26	23
25	18.0	5	7.78	7.77	3	1.34	4.83	3	1.25	24
				7.48	2	1.29	4.81	2	0.83	25
26	17.0	6	8.81							
27	16.0	7 S	9.88	7.81	2	1.35	4.71	2	0.81	26
28	16.4	8	11.3	8.33	2	1.44	4.65	2	0.80	27
29	17.1	6	8.86	7.99	2	1.38	4.60	2	0.79	28
30	15.8	5	6.83	7.46	2	1.29	4.55	2	0.79	29
31				7.13	2	1.23	4.85	2	0.88	30
				6.77	2	1.17	7.17	3 S	1.24	31
TOTAL	1 183.8		4 587.01	301.02		58.05	170.81		38.50	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

OLDMAN RIVER NEAR WALDRON'S CORNER - STATION NO. 05AA023

SUSPENDED SEDIMENT FOR 1986

DAY	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DAY
1	5.09	2	1.05	6.78	5	2.93	5.37	2	0.93	1
2	5.59	2	0.97	7.23	5	3.12	5.75	2	1.17	2
3	5.44	1	0.47	6.74	5	2.91	6.87	2	1.19	3
4	5.49	1 S	0.47	7.07	5	3.05	6.81	2 S	1.18	4
5	6.17	1	0.53	7.81	5	3.37	6.21			5
6	5.86	1	0.51	8.80	5	3.80	5.84			6
7	5.62	1	0.48	8.91	5	4.28	5.22			7
8	5.50	1	0.48	10.6	5	4.58	3.63 E			8
9	5.78	1	0.50	10.4	5	4.49	2.22 E			9
10	5.77	1	0.50	10.2	5	4.41	2.10 E			10
11	5.73	1	0.50	8.52	5	4.11	2.00 E			11
12	6.03	1	0.52	9.08	4	3.14	2.00 E			12
13	5.89	1	0.49	8.82	4	3.05	1.90 E			13
14	5.59	1	0.48	8.41	4	2.91	1.90 E			14
15	5.51	1	0.48	8.10	4	2.80	2.20 E			15
16	5.39	1	0.47	7.83	4	2.71	2.70 E			16
17	5.27	1	0.46	7.64	4	2.64	3.40 E			17
18	5.42	1	0.47	7.37	4	2.55	4.00 E			18
19	5.46	1	0.47	7.06	3	1.83	8.00 E			19
20	5.47	1	0.47	6.86	3	1.80	8.20 E			20
21	5.38	1	0.47	8.84	3	1.77	8.20 E			21
22	5.19	1	0.45	8.67	3	1.73	8.64 E			22
23	5.09	1	0.44	8.51	3	1.69	5.31 E			23
24	5.16	1	0.45	8.36	3	1.65	6.98 E			24
25	5.57	4	1.92	8.33	3	1.64	5.57 E			25
26	7.18	6	3.72	8.25	3	1.62	5.08 E			26
27	8.74	5	2.91	8.42	3	1.66	4.92 E			27
28	8.21	5	2.68	8.98	2	1.20	4.52 E			28
29	8.85	5	2.53	8.57	2	1.14	3.50 E			29
30	8.95	5 S	2.57	8.80	2	1.18	3.01 E			30
31				8.30	2	1.09				31
TOTAL	171.30		38.92	238.34		80.85	132.63		4.43	TOTAL

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 26	09:30	1.0	3.87	---	X	DH48	2		218														
APR 20	15:00	9.0	9.16	5.2		DH59	8																
APR 22	16:00	7.0	41.3	5.2		DH59	187		163														
APR 23	17:30	3.0	34.9	5.2		DH59	48																
APR 24	15:30	5.0	28.4	5.2		DH59	20																
APR 26	10:00	3.0	20.9	5.2		DH59	18		182														
APR 29	13:15	3.0	15.3	10.0	X	DH48	5																
MAY 01	15:30	7.0	13.1	5.2		DH59	5																
MAY 04	11:00	4.0	28.8	5.2		DH59	28		155														
MAY 05	10:30	3.5	28.3	5.2		DH59	21																
MAY 06	15:00	4.0	27.8	5.2		DH59	16																
MAY 09	10:00	4.0	28.0	5.2		DH59	13																
MAY 11	15:00	8.0	26.7	5.2		DH59	7		182														
MAY 15	17:00	5.5	21.8	5.2		DH59	7																
MAY 20	09:00	6.0	49.1	5.2		DH59	84																
MAY 21	19:30	7.0	108	5.2		DH59	542		133	6	8	21	38	54	70	83	95	100			30	62	8
MAY 22	08:45	4.0	93.6	5.2		DH59	206	C															
MAY 23	10:30	3.5	84.5	5.2		DH59	81																
MAY 25	16:30	10.0	58.2	5.2		DH59	37																
MAY 28	10:15	4.5	137	5.2		D49	480	C	127														
MAY 29	10:00	5.0	134	5.2		D49	528		118	7	13	27	37	54	68	80	95	100			32	55	13
MAY 30	19:00	10.0	120	5.2		D49	276	C	123														
MAY 31	20:00	10.5	111	5.2		D49	190																
JUN 01	20:00	10.5	102	5.2		D49	140																
JUN 02	20:15	11.0	93.9	5.2		D49	102																
JUN 04	20:00	8.5	86.2	5.2		D49	51																
JUN 06	20:30	10.0	55.8	5.2		D49	28		143														
JUN 07	19:30	10.5	52.3	5.2		D49	28																
JUN 08	20:30	8.0	53.2	5.2		D49	26																
JUN 09	19:00	11.0	46.4	5.2		D49	24																
JUN 10	20:15	12.0	42.8	5.2		D49	21		142														
JUN 11	19:30	11.0	42.3	5.2		D49	14																
JUN 12	19:30	11.0	38.1	5.2		D49	18																
JUN 13	18:30	11.0	34.9	5.2		D49	16																
JUN 15	18:45	12.5	34.2	5.2		D49	14																
JUN 17	15:30	13.0	27.7	5.2		D49	12		180														
JUN 18	14:00	12.0	28.4	5.2		D49	8																
JUN 20	19:30	11.0	23.3	5.2		D49	8																
JUN 23	10:30	11.0	18.7	5.2		D49	3																
JUN 24	14:00	12.0	18.8	5.2		DH59	4																
JUN 27	20:00	11.0	15.5	5.2		DH59	8		188														
JUL 01	16:00	11.0	14.2	5.2		DH59	3																
JUL 05	17:00	12.5	13.4	5.2		DH59	5		191														
JUL 08	19:30	13.0	11.2	5.2		DH59	2																
AUG 11	15:00	12.0	5.78	9.0	X	DH48	3		208														
AUG 31	11:00	12.0	7.73	5.2		DH59	2		210														
SEP 04	13:30	11.0	5.48	16.0	X	DH48	1		210														
SEP 30	08:30	8.0	5.80	35.0	X	DH48	5		211														
NOV 04	09:50	2.5	6.78	32.0	X	DH48	2		211														

NOTE : SINGLE VERTICAL LOCATED AT 4 METRES FOR 1986

CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

ALBERTA

OLDMAN RIVER NEAR WALDRON'S CORNER - STATION NO. 05AA023

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY - MAR-OCT MEAN LOAD (TONNES)	SUMMARY - MAR-OCT HISTORICAL MEAN LOAD (TONNES)	SUMMARY - MAR-OCT STANDARD ERROR OF MEAN %
1975	----PPPPPPP-	MANUAL	2 520	JUN 21 *	1	AUG 12	---	---	---	---	---	---
1976	---CCCCCCCCC	MANUAL	185	AUG 09	0	OCT 28 *	18 100	AUG 08 *	39 500	---	---	---
1977	CCCCCCCCCCCC	MANUAL	51	APR 06	0	JAN 05	96.5	MAY 11	1 380	5.40	5.40	---
1978	CCCCCCCCCCC	MANUAL	220	MAR 30	1	DEC 11	887	MAY 22	17 000	88.1	37.3	85.4
1979	CCCCCCCCCC--	MANUAL	135	MAY 27	0	JUL 17	1 100	MAY 27	7 810	30.9	35.1	52.7
1980	--CCCCCCCP-	MANUAL	103	MAY 25	0	APR 02	577	APR 30	6 270	25.6	32.8	40.6
1981	--CCCCCCC--	MANUAL	705	MAY 26	1	OCT 14	11 100	MAY 26	53 400 *	359	78.0	59.5
1982	---PCCCCC---	MANUAL	43	MAY 25	1	JUL 28	241	JUN 16	4 010	---	---	---
1983	---CCCCCC---	MANUAL	80	MAY 26	1	SEP 26	229	MAY 26	2 180	---	---	---
1984	---PCCCCC---	MANUAL	147	MAY 16	1	JUL 17	368	MAY 16	1 840	---	---	---
1985	---CCCCCC---	MANUAL	104	JUN 08	1	JUL 30	611	JUN 08	3 130	---	---	---
1986	--PCCCCCCP-	MANUAL	542	MAY 21	1	SEP 04	5 980	MAY 29	33 800	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

PADDLE RIVER NEAR ROCHFORT BRIDGE - STATION NO. 07BB004

LOCATION LAT 53 53 44 N LONG 115 02 27 W
DRAINAGE AREA 625 km²
TYPE OF FLOW REGULATED SINCE 1984
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE VERTICAL SAMPLING (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
APR 08	17 45	3.0	5.58	MID	X	DH59	48	159														
MAY 06	13 45	5.0	4.46	MID	X	DH48	46	170														
JUN 03	13 30	12.0	4.51	MID	X	DH48	22	213														
JUL 29	17 00	15.0	3.47	MID	X	DH48	43	202														
AUG 25	14 00	17.0	0.835	MID	X	DH48	10	238														
NOV 05	10 15	0.0	0.844	MID	X	DH48	54	302														

NOTE SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY - MEAN LOAD (TONNES)	SUMMARY - HISTORICAL MEAN LOAD (TONNES)	SUMMARY - STANDARD ERROR OF MEAN %
1974	------PPPP--	MANUAL	422	JUL 14	10	OCT 31	---	---	---	---	---	---
1975	---PPPPPP---	MANUAL	1 270	MAY 05	5	JUN 17 *	---	---	---	---	---	---
1976	---PPPPPP---	MANUAL	882	APR 06	5	MAY 20	---	---	---	---	---	---
1977	---PPP-PP---	MANUAL	880	MAY 30	11	JUN 23	---	---	---	---	---	---
1978	---PPPPPPP--	MANUAL	1 430	JUN 15	18	AUG 28	---	---	---	---	---	---
1979	---PPPPPPP--	MANUAL	1 800	APR 24 *	8	AUG 20	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	818	JUN 28	16	OCT 14	---	---	---	---	---	---
1981	---PPPPPPP--	MANUAL	76	APR 21	10	JUL 06	---	---	---	---	---	---
1982	------PP-PP-	MANUAL	406	JUL 07	23	NOV 02	---	---	---	---	---	---
1983	------PP-P---	MANUAL	218	JUN 28	23	SEP 21	---	---	---	---	---	---
1985	----P-PPPP--	MANUAL	303	AUG 15	14	OCT 07	---	---	---	---	---	---
1986	---PPPPP--P-	MANUAL	54	NOV 05	10	AUG 26	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

PEACE RIVER AT DUNVEGAN BRIDGE - STATION NO. 07FD003

LOCATION: LAT 55 55 09 N LONG 118 38 19 W
DRAINAGE AREA: 130 000 km²
TYPE OF FLOW: REGULATED SINCE 1967
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER		INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JUL 09	11:35	17.0	786		MID	X	DH59	47	145														
AUG 20	14:45	14.0	545	M	WERB	X	DIP	13	138														
SEP 12	13:50	12.0	482		300	X	DH59	5	138														

NOTE - SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

DISCHARGE SYMBOL(S): M - DAILY MEAN
VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MAY-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1975	---PCCCCCC--	MANUAL	2 470	MAY 27	10	OCT 21	472 000	MAY 27 *	8 270 000 *	32 300	32 300	---
1976	---PPPPP----	MANUAL	804	MAY 06	117	APR 30	---	---	---	---	---	---
1977	-----P-P----	MANUAL	4 730	JUN 13 *	130	AUG 18	---	---	---	---	---	---
1978	----P---P---	MANUAL	242	MAY 23	221	SEP 13	---	---	---	---	---	---
1980	----------P--	MANUAL	115	OCT 15	115	OCT 15	---	---	---	---	---	---
1981	----------P--	MANUAL	23	OCT 22	23	OCT 22	---	---	---	---	---	---
1982	-----P-------	MANUAL	95	JUN 22	95	JUN 22	---	---	---	---	---	---
1983	--------P---	MANUAL	12	SEP 16	12	SEP 16	---	---	---	---	---	---
1984	--------P---	MANUAL	35	AUG 22	35	AUG 22	---	---	---	---	---	---
1985	-----P-P-P--	MANUAL	283	JUN 03	11	AUG 08	---	---	---	---	---	---
1986	------PPP---	MANUAL	47	JUL 09	5	SEP 12 *	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

PEACE RIVER AT PEACE POINT - STATION NO. 07KC001

LOCATION: LAT 59 08 50 N LONG 112 25 35 W
DRAINAGE AREA: 293 000 km²
TYPE OF FLOW: REGULATED SINCE 1968
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER		INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 21	13:05	1.0	3180		351		D48	599	153	33	45	63	73	85	92	97	100				8	47	45
MAY 21	13:15	1.0	3180		351		DIP	557	168														
MAY 21	13:20	1.0	3180		---	X	DIP	501	183														
SEP 04	13:10	3.0	893		351		D48	18	210														

NOTE - SINGLE VERTICAL LOCATED AT 351 METRES FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

ALBERTA

PEACE RIVER AT PEACE POINT - STATION NO. 07KC001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MAY-SEP MEAN LOAD (TONNES)	SUMMARY : MAY-SEP HISTORICAL MEAN LOAD (TONNES)	SUMMARY : MAY-SEP STANDARD ERROR OF MEAN %
1967	----PCCCC---	MANUAL	2 080	MAY 24	30	SEP 21	2 530 000	JUN 07	52 700 000 *	---	---	---
1968	----CCCCC---	MANUAL	4 490	JUN 20 *	63	SEP 06	2 470 000	JUN 19	21 700 000	142 000	142 000	---
1969	----CCCCC---	MANUAL	1 030	MAY 15	135	JUL 04	677 000	MAY 07	13 900 000	90 900	116 000	22.0
1970	-P-PP-P--P--	MANUAL	507	MAY 08	42	FEB 23	---	---	---	---	---	---
1971	-----PCCC---	MANUAL	3 810	JUN 23	34	SEP 30	2 740 000	JUN 22 *	36 100 000	---	---	---
1972	P-PP-P-PPPP-	MANUAL	3 030	JUN 22	14	NOV 28 *	---	---	---	---	---	---
1973	-PPPP-PP-P--	MANUAL	1 180	MAY 10	27	MAR 27	---	---	---	---	---	---
1974	----P-PPPP--	MANUAL	2 180	MAY 08	51	SEP 28	---	---	---	---	---	---
1975	-----P------	MANUAL	273	JUN 03	281	JUN 28	---	---	---	---	---	---
1976	-----PPPPP--	MANUAL	1 410	JUL 14	138	SEP 17	---	---	---	---	---	---
1977	----P----P--	MANUAL	393	MAY 05	108	OCT 26	---	---	---	---	---	---
1978	----P-P-----	MANUAL	1 050	MAY 12	235	JUL 19	---	---	---	---	---	---
1979	-----PP-P---	MANUAL	825	JUN 21	108	SEP 21	---	---	---	---	---	---
1980	----PP-P-P--	MANUAL	1 420	JUN 27	45	OCT 21	---	---	---	---	---	---
1981	----PPP-P-P-	MANUAL	850	MAY 19	35	SEP 14	---	---	---	---	---	---
1982	----P-PPP---	MANUAL	3 230	AUG 10	74	SEP 30	---	---	---	---	---	---
1983	-----P--P-P-	MANUAL	244	JUN 13	87	NOV 03	---	---	---	---	---	---
1984	---PPP-P-P--	MANUAL	2 320	JUN 15	31	AUG 27	---	---	---	---	---	---
1985	----P-P--P--	MANUAL	453	MAY 28	78	OCT 29	---	---	---	---	---	---
1986	----P---P---	MANUAL	599	MAY 21	18	SEP 04	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

PEACE RIVER AT PEACE RIVER - STATION NO. 07HA001

SUSPENDED SEDIMENT FOR 1986

LOCATION: LAT 56 14 41 N LONG 117 19 48 W
DRAINAGE AREA: 186 000 km²
TYPE OF FLOW: REGULATED SINCE 1967
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 22 800 000 TONNES FOR THE PERIOD MAR 04 TO DEC 31

REMARKS:

	MAR			MAY			JUN			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	1 060 B			2 330	478 S	85 800	4 520	1 950 S	762 000	1
2	1 100 B			2 380	201	41 500	4 170	1 770 S	638 000	2
3	1 110 B			2 230	241	46 400	4 000	1 850 S	570 000	3
4	1 070 B	122 S	11 300	2 230	529	102 000	3 810	1 230	384 000	4
5	1 040 B			2 320	824 S	125 000	3 210	1 190	330 000	5
6	1 080 B			2 540	1 280 S	281 000	2 790	892 S	215 000	6
7	1 140 B			2 780	1 400 S	336 000	2 880	625	145 000	7
8	1 080 B			2 670	1 080 S	249 000	2 880	780	194 000	8
9	1 110 B			2 500	1 020 S	220 000	2 900	830 S	208 000	9
10	1 320 B			2 350	780	180 000	2 820	570 S	138 000	10
11	1 010 B			2 310	631 S	126 000	2 670	522 S	120 000	11
12	912 B			2 190	545 S	103 000	2 530	411 S	89 800	12
13	1 110 B			2 190	506 S	95 700	2 530	678	148 000	13
14	1 130 B			2 480	768 S	183 000	2 260	557	109 000	14
15	867 B			2 730	1 050 S	248 000	2 080	458	81 500	15
16	1 050 B			2 750	1 110 S	264 000	1 880	482	84 800	16
17	1 220 B			2 850	1 180	270 000	2 540	959 S	210 000	17
18	1 020 B			2 770	1 450	347 000	2 820	578 S	131 000	18
19	843 B			2 790	1 830 S	393 000	2 450	585 S	124 000	19
20	1 180 B			2 880	1 440 S	335 000	2 290	411 S	81 300	20
21	1 480 B			2 780	1 550	372 000	2 210	353 S	67 400	21
22	1 100 B			3 310	1 920 S	549 000	2 050	260 S	46 100	22
23	1 280 B			3 340	1 380 S	382 000	1 810	222 S	34 700	23
24	1 200 B			3 080	861	256 000	1 720	197 S	29 300	24
25	897 B			2 810	759 S	184 000	1 910	338 S	55 800	25
26	859 B			2 620	558 S	126 000	2 020	478	83 400	26
27	1 500 B			2 780	719 S	173 000	1 850	334	53 400	27
28	1 750 B			3 820	3 130 S	1 030 000	1 820	191 S	28 700	28
29	1 820 B			4 570	4 010 S	1 580 000	1 470	151 S	19 200	29
30	1 830 B			4 590	2 820 S	1 180 000	1 380	138	16 500	30
31	1 880 B			4 680	2 390 S	942 000				31
TOTAL	37 218		11 300	88 130		10 785 400	75 570		5 198 700	TOTAL

	JUL			AUG			SEP			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	1 350	141 S	16 400	1 420	188	23 100	938	40	3 240	1
2	1 410	142 S	17 300	1 410	185	22 500	770	29 S	1 930	2
3	1 410	138	16 800	1 350	174	20 300	737	26	1 780	3
4	1 420	134	16 400	1 240	156	16 900	712	27	1 880	4
5	1 420	136 S	16 700	1 150	141 S	14 000	725	32	2 000	5
6	1 300	139	15 600	1 130	135	13 200	728	33 S	2 080	6
7	1 380	166 S	19 500	1 080	131 S	12 000	795	45	3 090	7
8	1 500	249 S	32 300	990	124	10 600	783	48 S	3 180	8
9	1 620	314 S	43 900	910	117	9 200	688	41	2 440	9
10	1 660	784	110 000	905	114	8 910	638	34	1 870	10
11	1 610	836	117 000	928	118	9 480	854	30	1 700	11
12	1 560	884	118 000	822	96	6 830	818 A	28	1 330	12
13	1 480	982 S	133 000	814	73 S	5 130	818	22	1 170	13
14	1 520	755 S	99 200	803	58	4 020	821	20	1 070	14
15	1 430	250	30 800	807	56	3 900	818	19	1 010	15
16	1 430	282	34 800	828	55	4 150	891	17	858	16
17	2 460	716 S	152 000	808	58	4 080	885	15	758	17
18	3 710	3 390 S	1 090 000	788	56	3 850	892	14 S	718	18
19	3 890	3 850	1 230 000	788	50 S	3 280	864	14	731	19
20	3 540	3 070 S	938 000	740	47	3 000	733	32	2 040	20
21	3 000	1 800 S	492 000	747	41 S	2 850	1 370	72	8 520	21
22	2 560	1 180	283 000	708	31	1 900	1 210	54	5 850	22
23	2 260	784 S	147 000	773	40	2 670	1 080	43	3 940	23
24	2 060	457	81 300	742	38	2 440	1 230	49	5 210	24
25	2 020	527	92 000	734	39	2 480	1 280	45 S	4 900	25
26	2 010	838	110 000	855	30	1 710	1 170	38	3 840	26
27	1 820	502	78 800	880	28 S	1 800	1 130	37	3 610	27
28	1 810	374	52 000	718	33 S	1 430	1 250	67	7 240	28
29	1 450	283 S	38 800	777	38	1 880	1 480	85 S	12 000	29
30	1 380	214 S	25 100	824	34	2 710	1 700	192	28 200	30
31	1 420	188	23 100	1 080	48	4 480				31
TOTAL	58 480		5 838 800	28 184		224 000	28 570		117 783	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS S - SAMPLE(S) COLLECTED THIS DAY

ALBERTA

PEACE RIVER AT PEACE RIVER - STATION NO 07HA001

SUSPENDED SEDIMENT FOR 1986

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	1 740	247	37 100							1
2	1 790	278	42 700							2
3	1 820	250	38 000							3
4	1 720	268	39 500							4
5	1 820	242	33 800							5
6	1 480	230	29 000							6
7	1 680	290	42 100							7
8	1 990	388	83 300							8
9	2 030	348	61 000							9
10	1 900	303	49 700							10
11	1 850	243	28 800							11
12	1 790	259	40 100							12
13	1 510	200	26 100							13
14	1 370	149	17 800							14
15	1 320	141	16 100							15
16	1 500	217 S	28 100							16
17	1 390	109	13 100							17
18	1 240	31 S	3 320							18
19	1 180	19	1 840							19
20	1 110	18	1 730							20
21	1 110	18 S	1 730							21
22	1 310	23 S	2 800							22
23	1 310	20	2 280							23
24	1 300	25	2 810							24
25	1 380	30	3 530							25
26	1 400	26	3 140							26
27	1 340	23	2 680							27
28	1 250	20	2 180							28
29	1 180	17	1 730							29
30	1 220	18 S	1 900							30
31	1 230	18	1 910							31
TOTAL	45 820		645 820							TOTAL

S - SAMPLE(S) COLLECTED THIS DAY

PEACE RIVER AT PEACE RIVER - STATION NO. 07HA001

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 04	12:30	0.0	1070	B	250	X	DH59	122		140														
MAY 01	14:05	4.5	2400		MID		D74	430		135														
MAY 05	14:55	7.5	2350		MID		D74	827	C	182														
MAY 06	15:30	8.0	2740		MID		D74	1400		181	23	26	40	48	58	84	93	99			15	58	28
MAY 07	15:55	9.0	2830		MID		D74	1530		181	23	29	44	56	74	88	94	99			14	57	29
MAY 08	15:25	9.0	2700		MID		D74	1070		167	27	34	52	61	78	88	92	99			14	52	34
MAY 09	15:15	10.0	2570		MID		D74	1070		170	31	35	55	63	78	88	93	99			14	51	35
MAY 11	15:05	10.0	2340		MID		D74	614	C															
MAY 12	15:15	9.5	2190		MID		D74	554	C															
MAY 13	15:15	8.0	2210		MID		D74	537	C	150														
MAY 14	17:30	7.5	2550		MID		D74	879		142														
MAY 15	20:00	7.0	2810		MID		D74	1120		158														
MAY 16	15:30	8.0	2680		MID		D74	1080		165														
MAY 19	20:05	11.0	2570		MID		D74	1550		181														
MAY 20	15:30	11.5	2690		MID		D74	1420		193														
MAY 22	15:00	8.5	3380		MID		D74	1960																
MAY 23	21:25	10.0	3260		MID		D74	1150																
MAY 25	15:45	12.0	2750		MID		D74	728																
MAY 26	13:20	13.0	2850		MID		D74	582		150														
MAY 27	15:45	14.5	2830		MID		D74	744		172														
MAY 28	15:00	14.0	4070		MID		D74	3740		192														
MAY 29	15:30	13.5	4730		MID		D74	3540		171	12	19	30	43	85	85	97				14	67	19
MAY 31	15:45	14.0	4840		MID		D74	2380		183														
JUN 01	15:05	13.5	4820		MID		D74	1930		183														
JUN 02	15:10	12.5	4180		MID		D74	1850		188														
JUN 06	15:30	14.0	2730		MID		D74	771		124														
JUN 09	20:15	13.0	2900		MID		D74	732																
JUN 11	15:45	12.0	2640		MID		D74	532																
JUN 12	20:00	11.5	2530		MID		D74	454		115														
JUN 17	17:15	15.0	2810		MID		D74	989		121														
JUN 18	18:00	14.0	2600		MID		D74	504																
JUN 19	18:00	13.0	2380		MID		D74	595																
JUN 20	15:05	12.0	2260		MID		D74	370		149														
JUN 21	20:05	14.0	2170		MID		D74	305																
JUN 22	19:45	15.0	1980		MID		D74	245																
JUN 23	15:00	15.5	1780		MID		D74	220																
JUN 24	20:00	15.5	1660		MID		D74	185		148														
JUN 25	15:30	11.0	2000		MID		D74	378																
JUN 28	20:30	17.0	1580		MID		D74	180																
JUN 29	19:05	17.0	1420		MID		D74	130																
JUL 01	14:40	18.0	1350		MID		D74	141		141														
JUL 02	14:00	18.5	1410		MID		D74	147																
JUL 05	19:55	16.0	1380		MID		D74	141		141														
JUL 07	19:20	17.0	1410		MID		D74	178																
JUL 08	12:25	18.0	1520		MID		D74	255																
JUL 09	19:15	18.0	1650		MID		D74	334																
JUL 13	20:10	17.0	1470		MID		D74	1130																
JUL 14	20:30	16.0	1510		MID		D74	347		165														
JUL 17	21:00	15.5	3070		MID		D74	1080		165														
JUL 18	08:00	14.0	3750		MID		D74	2980		165	24	34	45	54	89	84	98	99			15	50	34
JUL 20	16:31	16.0	3430		MID		D74	2660		231														
JUL 21	19:15	17.0	2880		MID		D74	1600		147														
JUL 28	19:30	16.5	1400		MID		D74	268		159														
JUL 30	19:15	17.0	1360		MID		D74	189																
AUG 05	20:10	19.0	1140		MID		D74	135																
AUG 07	15:20	20.0	1040		MID		D74	129																
AUG 13	16:05	21.0	804		MID		D74	87																
AUG 18	13:45	15.0	782		MID		D74	48		182														
AUG 19	15:00	16.0	733		MID		D74	47		156														
AUG 27	19:30	16.0	658		MID		D74	25		186														
AUG 28	13:15	16.5	702		MID		D74	23		163														
SEP 02	16:35	16.0	780		MID		D74	27																
SEP 08	17:15	15.0	743		MID		D74	33																
SEP 08	16:05	15.0	735		MID		D74	47		170														
SEP 18	15:15	11.0	583		MID		D74	14		168														
SEP 25	13:25	11.0	1270		MID		D74	45		129														
SEP 28	13:05	9.0	1830		MID		D74	129		161														
OCT 16	16:20	8.0	1680		MID		D74	268		152														
OCT 18	15:30	9.0	1240		MID		D74	18		234														
OCT 21	17:30	9.0	1070		MID		D74	14		159														
OCT 22	15:20	9.0	1410		MID		D74	28		130														
OCT 30	13:30	3.0	1150		MID		D74	13		141														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

DISCHARGE SYMBOL(S): B - ICE CONDITIONS
CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

ALBERTA

PEACE RIVER AT PEACE RIVER - STATION NO. 07HA001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY - JAN-DEC MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1966	-----CCCCC--	MANUAL	3 800	AUG 30	15	OCT 25	1 080 000	AUG 30	12 900 000	---	---	---
1967	----PCCCCCCC	MANUAL	2 210	MAY 18	10	SEP 19	1 440 000	JUN 04	31 800 000	---	---	---
1968	CCC-CCCCCC--	MANUAL	7 080	JUN 14	23	JAN 05	3 800 000	JUN 14	18 700 000	---	---	---
1969	CCC-CCCCCCCC	MANUAL	4 800	MAY 01	11	DEC 10	1 830 000	MAY 02	12 800 000	---	---	---
1970	CCCCCCCCCCCC	MANUAL	2 870	APR 18	5	SEP 21	827 000	JUN 05	16 500 000	---	---	---
1971	CCCCCCCCCCC	MANUAL	6 930	JUN 18	9	NOV 16	5 340 000	JUN 18	58 100 000	45 200	45 200	---
1972	CCCCCCCCCCC	MANUAL	8 090	JUN 15	3	MAR 17	14 800 000	JUN 14 *	76 300 000 *	159 000	102 000	55.8
1973	CCCCCCCCCCC	MANUAL	3 300	APR 13	2	SEP 11 *	1 120 000	APR 14	31 500 000	208 000	137 000	35.2
1974	CCCCCCCCCCC	MANUAL	6 310	APR 23	13	NOV 02	4 030 000	APR 28	59 000 000	85 300	128 000	0.0
1975	CCCCCCCCCCCC	MANUAL	2 220	JUL 02	7	FEB 20	1 370 000	JUL 01	15 800 000	182 000	132 000	0.0
1976	CCCCCCCCCCC	MANUAL	5 000	AUG 19	10	JAN 23	3 330 000	AUG 19	51 900 000	46 100	118 000	0.0
1977	CCCCCCCCCCC	MANUAL	6 380	JUN 11	20	FEB 08	3 280 000	JUN 11	42 400 000	142 000	121 000	0.0
1978	-PP-CCCCC--P	MANUAL	3 020	JUL 13	2	SEP 05	784 000	JUN 17	11 100 000	118 000	121 000	0.0
1979	--P-PCC-PCP-	MANUAL	4 160	MAY 16	10	MAR 29	1 430 000	MAY 16	23 200 000	---	---	---
1980	--PPCCCCCC--	MANUAL	2 530	JUN 09	7	MAR 13	1 920 000	JUN 06	17 700 000	---	---	---
1981	PPP-CCCCCC--	MANUAL	7 410	MAY 08	12	JAN 27	1 710 000	MAY 08	18 800 000	---	---	---
1982	--P-CCCC--P-	MANUAL	8 140	AUG 04 *	25	NOV 01	4 780 000	JUL 17	40 300 000	---	---	---
1983	----CCPPCC--	MANUAL	4 840	JUN 22	28	SEP 22	1 980 000	JUL 17	25 300 000	---	---	---
1985	---PCCCCCCP-	MANUAL	934	MAY 20	13	NOV 04	279 000	MAY 23	8 090 000	---	---	---
1986	--P-CCCCCC--	MANUAL	3 740	MAY 28	13	OCT 30	1 580 000	MAY 28	22 800 000	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

PEIGAN CREEK NEAR PAKOWKI ROAD - STATION NO. 05AH041

LOCATION: LAT 49 34 50 N LONG 110 55 30 W
DRAINAGE AREA: 440 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
FEB 27	09:15	0.0	13.0	B	14.0 K	DH59	119	105														
MAR 01	09:45	2.0	5.21		15.0 K	DH48	219	119														
MAR 03	09:20	1.0	3.47		1.9 K	DH48	120	126														
MAR 05	11:30	4.0	2.32		3.0 K	DH48	68	152														
MAR 12	13:05	4.0	0.354		2.8 K	DH48	22	192														
APR 02	10:00	5.0	0.075		0.6 K	DH48	11	480														
APR 21	11:00	13.0	0.013		0.6 K	DIP	8	585														
MAY 20	12:10	16.0	2.67		3.0 K	DH48	119	565														
JUN 08	10:30	18.0	0.018		0.9 K	DIP	5	533														
JUN 23	11:58	22.0	0.118		1.0 K	DIP	11	521														
SEP 26	18:05	5.0	9.31		11.0 K	DH48	1030	209														
SEP 26	19:06	5.0	9.31		11.0 K	DH48	1010	214														
SEP 28	08:40	7.0	3.31		5.0 K	DH48	215	212														
OCT 02	10:35	5.0	0.898		4.0 X	DIP	89	279														

NOTE - SINGLE VERTICAL IS UNDETERMINED FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS
VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY - MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1976	--PPP-------	MANUAL	302	MAR 19	0	MAY 10 *	---	---	---	---	---	---
1978	--PPP-P------	MANUAL	383	APR 05	4	MAY 30	---	---	---	---	---	---
1979	--PPP-------	MANUAL	441	MAR 15	10	MAY 02	---	---	---	---	---	---
1980	--PP--------	MANUAL	31	MAR 25	18	APR 09	---	---	---	---	---	---
1981	--P---------	MANUAL	22	MAR 10	22	MAR 10	---	---	---	---	---	---
1982	-----P------	MANUAL	127	JUN 04	127	JUN 04	---	---	---	---	---	---
1985	--PPP-------	MANUAL	1 320	APR 02 *	21	MAY 01	---	---	---	---	---	---
1986	-PPPPP--PP--	MANUAL	1 030	SEP 28	5	JUN 08	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

PEMBINA RIVER AT JARVIE - STATION NO. 07BC002

LOCATION: LAT 54 27 05 N LONG 113 59 30 W
DRAINAGE AREA: 13 100 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE VERTICAL SAMPLING (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 14	17:50	4.0	46.8	32.0 K	DH59	224	177														
MAY 05	14:50	8.0	82.4	34.0 K	DH59	214	193														
JUN 02	12:58	16.0	84.6	32.0 K	DH59	309	180	16	20	37	48	58	68	80	94	100			32	48	20
JUL 15	08:45	17.0	72.7	26.0 K	DH59	283	138														
AUG 25	15:20	14.0	42.3	38.0 K	DH59	59	235														
SEP 22	14:15	8.0	35.1	32.0 K	DH59	48	214														
NOV 03	15:25	1.0	35.0	34.0 K	DH59	51	201														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1976	---PP-P-P---	MANUAL	534	APR 14	19	SEP 24	---	---	---	---	---	---
1977	---PPPP-P---	MANUAL	2 120	MAY 11	50	SEP 25	---	---	---	---	---	---
1978	---PPP-PP-P-	MANUAL	812	JUN 18	31	AUG 31	---	---	---	---	---	---
1979	---PPPPPP---	MANUAL	1 800	APR 26	11	SEP 19	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	2 500	APR 17 *	41	OCT 17	---	---	---	---	---	---
1981	---PPPPPPP--	MANUAL	223	APR 10	4	OCT 05	---	---	---	---	---	---
1982	-----P-P----	MANUAL	438	AUG 30	220	JUN 11	---	---	---	---	---	---
1983	----PPPP-P--	MANUAL	1 030	MAY 09	11	OCT 31	---	---	---	---	---	---
1984	----PPP-PP--	MANUAL	426	JUN 11	3	SEP 04 *	---	---	---	---	---	---
1985	---PPPPPP---	MANUAL	1 580	APR 10	14	JUL 30	---	---	---	---	---	---
1986	---PPPPPP-P-	MANUAL	309	JUN 02	48	SEP 22	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

PEMBINA RIVER NEAR ENTWISTLE - STATION NO. 07BB002

LOCATION: LAT 53 36 18 N LONG 115 00 14 W
DRAINAGE AREA: 4 420 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE VERTICAL SAMPLING (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 18	15:35	0.0	15.0	24.0	X	DH48	25	185														
MAY 14	15:45	9.0	46.5	182	X	DH59	70	144														
JUN 11	13:05	19.0	18.4	26.0	X	DH59	7	162														
JUL 09	13:50	17.0	55.2	82.0	X	DH59	65	146														
JUL 21	11:45	15.0	855	WERB	X	DIP	3140	173														
AUG 14	15:25	20.0	31.3	54.0	X	DH59	81	188														
SEP 17	14:25	11.0	24.0	52.0	X	DH59	24	200														
OCT 22	14:15	5.0	27.0	84.0	X	DH59	18	181														
NOV 05	13:10	2.0	20.3	86.0	X	DH59	15	185														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

ALBERTA

PEMBINA RIVER NEAR ENTWISTLE - STATION NO. 07BB002

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MEAN LOAD (TONNES)	SUMMARY : HISTORICAL MEAN LOAD (TONNES)	SUMMARY : STANDARD ERROR OF MEAN %
1974	-------PPPP--	MANUAL	17	JUL 23	2	OCT 29 *	---	---	---	---	---	---
1975	----PPPPP----	MANUAL										
1976	---PPPPP-----	MANUAL	51	MAY 18	3	AUG 19	---	---	---	---	---	---
1977	----PPPPP----	MANUAL	23	AUG 19	7	JUL 19	---	---	---	---	---	---
1978	-----PPPP----	MANUAL	128	MAY 08	10	JUN 23	---	---	---	---	---	---
1979	-----PPPP----	MANUAL	333	JUN 19	8	AUG 21	---	---	---	---	---	---
			11	JUN 11	6	AUG 13	---	---	---	---	---	---
1980	---PPPPP-----	MANUAL										
1981	---PP-PP-----	MANUAL	353	APR 14	10	AUG 18	---	---	---	---	---	---
1982	-----PP-PP---	MANUAL	159	MAY 11	8	JUL 06	---	---	---	---	---	---
1983	---P-P-PPP---	MANUAL	78	JUL 28	2	SEP 27	---	---	---	---	---	---
1984	---P--P-P----	MANUAL	199	JUN 27	2	SEP 28	---	---	---	---	---	---
			48	SEP 10	5	JUL 04	---	---	---	---	---	---
1985	---PPPPPPPP-	MANUAL	202	APR 12	3	JUL 16	---	---	---	---	---	---
1986	---PPPPPPPP-	MANUAL	3 140	JUL 21 *	7	JUN 11	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

PINE CREEK NEAR GRASSLAND - STATION NO. 07CA005

LOCATION: LAT 54 48 12 N LONG 112 48 34 W
DRAINAGE AREA: 1 450 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
APR 15	13:40	3.0	2.09	6.0	X DH48	25	336														
MAY 06	10:45	8.0	0.834	7.0	X DH48	20	249														
JUN 03	11:46	17.0	0.317	5.0	X DH48	42	283														
JUL 17	15:15	17.0	4.25	MID	X DH59	38	324														
AUG 26	10:10	13.0	1.56	6.0	X DH48	31	288														
SEP 23	11:27	9.0	0.673	3.0	X DH48	27	311														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MEAN LOAD (TONNES)	SUMMARY : HISTORICAL MEAN LOAD (TONNES)	SUMMARY : STANDARD ERROR OF MEAN %
1974	-------PP---	MANUAL	51	AUG 13	48	SEP 17	---	---	---	---	---	---
1975	---P--PPP---	MANUAL	198	APR 21	18	APR 15						
1976	---PPPPPPP--	MANUAL	683	APR 12 *	8	JUN 15	---	---	---	---	---	---
1977	----PPPPPP--	MANUAL	84	JUN 07	21	AUG 10	---	---	---	---	---	---
1978	---PPPPPPP--	MANUAL	204	JUN 02	41	JUN 27	---	---	---	---	---	---
1979	----PPPPPP--	MANUAL	118	MAY 02	15	OCT 31	---	---	---	---	---	---
1980	---PPPPPP----	MANUAL	92	SEP 25	23	JUN 04	---	---	---	---	---	---
1981	---PPPP-P----	MANUAL	85	APR 21	8	SEP 29 *	---	---	---	---	---	---
1982	-----PPP-----	MANUAL	35	AUG 04	12	JUN 07	---	---	---	---	---	---
1983	-------P-----	MANUAL	20	AUG 08	20	AUG 09	---	---	---	---	---	---
1984	-----PPPPP---	MANUAL	45	JUN 07	8	SEP 06	---	---	---	---	---	---
1985	---PPPPP-----	MANUAL	342	APR 09	9	AUG 27	---	---	---	---	---	---
1986	---PPPPPP----	MANUAL	42	JUN 03	20	MAY 05	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

PONTON RIVER ABOVE BOYER RIVER - STATION NO. 07JF003

LOCATION: LAT 58 27 53 N LONG 116 15 23 W
DRAINAGE AREA: 2 440 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: MANUAL

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER		INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 12	15:10	7.0	80.1	15.0	X	DH59		3540		173	20	25	39	50	69	86	98					14	61	25
MAY 28	09:40	14.5	34.9	18.0	X	DH59		1040		138														
JUN 24	09:40	14.0	48.0	18.0	X	DH59		1480	C	155														
JUL 31	09:50	17.0	28.5	20.0	X	DH59		573	C	139														
AUG 28	09:10	10.0	20.4	20.0	X	DH59		360	C	151														
SEP 23	15:10	8.0	4.85	MID		DH48		33		172														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)				MINIMUM (mg/L)				SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1975	---PP-------	MANUAL	1 880	APR	29		36	APR	22		---	---	---	---	---	---
1976	---PPPPPPP--	MANUAL	3 420	APR	28		18	OCT	27		---	---	---	---	---	---
1977	---P-PP-PP--	MANUAL	1 050	APR	28		13	OCT	06		---	---	---	---	---	---
1978	----PPPP-P--	MANUAL	459	MAY	09		20	AUG	03		---	---	---	---	---	---
1979	----PPPPP-P-	MANUAL	2 200	MAY	18		7	SEP	27		---	---	---	---	---	---
1980	-----PPP----	MANUAL	50	JUL	03		5	AUG	08	*	---	---	---	---	---	---
1981	----PP-PPP--	MANUAL	383	MAY	27		7	SEP	08		---	---	---	---	---	---
1982	----PPPP-P--	MANUAL	2 740	MAY	04		6	AUG	25		---	---	---	---	---	---
1983	----PP-PPP--	MANUAL	321	MAY	05		9	SEP	01		---	---	---	---	---	---
1984	----PPPPP---	MANUAL	5 070	JUL	04	*	27	MAY	04		---	---	---	---	---	---
1985	----PPPPPP--	MANUAL	726	JUL	23		23	OCT	30		---	---	---	---	---	---
1986	----PPPPP---	MANUAL	3 540	MAY	12		33	SEP	23		---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

POPLAR CREEK NEAR FORT MCMURRAY - STATION NO 07DA007

LOCATION: LAT 56 54 50 N LONG 111 27 35 W
DRAINAGE AREA: 151 km²
TYPE OF FLOW: REGULATED SINCE 1976
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 12	15:00	4.0	4.74	10RB	DIP	28	283														
JUN 24	11:10	20.0	1.83	10RB	DIP	6	272														
AUG 25	11:30	8.0	1.15	10RB	DIP	3	246														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

ALBERTA

POPLAR CREEK NEAR FORT MCMURRAY - STATION NO. 07DA007

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : APR-OCT MEAN LOAD (TONNES)	SUMMARY : APR-OCT HISTORICAL MEAN LOAD (TONNES)	SUMMARY : APR-OCT STANDARD ERROR OF MEAN %
1974	----------P--	MANUAL	4	OCT 07	4	OCT 07	---	---	---	---	---	---
1975	---PPPPP----	MANUAL	382	MAY 26	22	JUN 02	---	---	---	---	---	---
1976	CCCCCCCCCCCC	MANUAL	542	APR 08 *	5	NOV 05	---	---	---	---	---	---
1977	---CCCCCCC--	MANUAL	71	APR 20	5	SEP 19	393	AUG 30	2 540	11.8	11.8	---
1978	---CCCCCCC--	MANUAL	397	SEP 12	5	AUG 04	28.5	APR 20	700	3.27	7.54	56.6
1979	---PPPPPPP--	MANUAL	136	APR 23	10	OCT 19	521	SEP 12 *	4 330 *	20.2	11.8	41.4
1980	---PPPPPPP--	MANUAL	54	APR 21	5	OCT 20	---	---	---	---	---	---
1981	----P-PP----	MANUAL	21	MAY 25	13	AUG 28	---	---	---	---	---	---
1982	-----P-PP---	MANUAL	9	JUN 21	3	SEP 19 *	---	---	---	---	---	---
1983	---P-P-P----	MANUAL	18	APR 29	5	AUG 03	---	---	---	---	---	---
1984	-----PP-PP---	MANUAL	51	JUN 25	11	AUG 07	---	---	---	---	---	---
1985	---P-P-P----	MANUAL	82	APR 26	11	JUN 13	---	---	---	---	---	---
1986	----PP-P----	MANUAL	26	MAY 12	3	AUG 25	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

RAM RIVER NEAR THE MOUTH - STATION NO. 05DE006

LOCATION: LAT 52 21 55 N LONG 115 25 33 W
DRAINAGE AREA: 1 880 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE VERTICAL SAMPLING (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
MAY 27	17:00	11.0	114	54.0 X	DH48	2490	165	19	24	40	53	72	88	98	100						
JUN 25	14:10	13.0	23.3	20.0 X	DH48	10	233														
JUL 19	10:00	9.0	159	38.0 X	DH48	707	183	13	19	30	39	56	69	83	95	100			12	64	24
JUL 22	15:10	9.0	93.8	80.0 X	DH48	498	186														
AUG 26	15:50	15.0	14.8	14.0 X	DH48	8	274														
SEP 23	11:40	6.0	15.7	22.0 X	DH48	4	274														
NOV 04	14:45	1.0	14.9	22.0 X	DH48	5	261												31	50	19

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MEAN LOAD (TONNES)	SUMMARY : HISTORICAL MEAN LOAD (TONNES)	SUMMARY : STANDARD ERROR OF MEAN %
1976	---PPPPPP---	MANUAL	355	AUG 12	12	APR 28	---	---	---	---	---	---
1977	---PPPPPP---	MANUAL	242	MAY 26	11	SEP 15	---	---	---	---	---	---
1978	---PPPPPPP--	MANUAL	384	MAY 23	4	SEP 26	---	---	---	---	---	---
1979	----PPPPPP--	MANUAL	43	MAY 22	0	AUG 14 *	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	1 500	JUN 08	8	OCT 29	---	---	---	---	---	---
1981	----PPP-PPP--	MANUAL	142	MAY 28	1	SEP 28	---	---	---	---	---	---
1982	-----PPP-PP--	MANUAL	885	JUL 08	1	SEP 14	---	---	---	---	---	---
1983	----PPPPP----	MANUAL	1 330	MAY 30	2	SEP 27	---	---	---	---	---	---
1984	---PPPPPP----	MANUAL	38	JUN 20	1	AUG 20	---	---	---	---	---	---
1985	------PPPP---	MANUAL	184	AUG 22	16	JUL 18	---	---	---	---	---	---
1986	----PPPPP-P-	MANUAL	2 490	MAY 27 *	4	SEP 23	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

RED DEER RIVER AT DRUMHELLER - STATION NO. 05CE001

LOCATION: LAT 51 28 08 N LONG 112 42 30 W
DRAINAGE AREA: 24 800 km²
TYPE OF FLOW: REGULATED SINCE 1983
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 02	12:30	1.0	46.5	32.0 K	DH59	69	219														
APR 21	18:10	15.0	20.8	MID X	DH48	8	268														
MAY 19	15:40	15.0	181	72.0	DH59	553	310														
MAY 22	12:40	10.0	286 H	10RB X	DH59	779	245	9	17	28	45	69	88	94	99	100			14	69	17
JUN 18	12:10	15.0	92.3	72.0	DH59	382	210														
JUL 14	11:35	18.0	72.7	72.0	DH59	44	214														
AUG 12	16:15	19.0	85.2	72.0	DH59	1320	228														
SEP 15	12:15	7.0	36.8	72.0	DH59	11	238														
SEP 28	12:15	9.0	325	72.0	DH59	976	237														
OCT 16	15:30	9.0	95.8	72.0	DH59	74	244														
NOV 03	11:30	2.0	54.7	32.0 K	DH59	10	285														

NOTE : SINGLE VERTICAL LOCATED AT 45 METRES FOR 1986

DISCHARGE SYMBOL(S): H - DAILY MEAN
VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1978	-PPCCCCCCCCC	MANUAL	4 750	MAY 05	0	FEB 21 *	116 000	APR 21	607 000	---	---	---
1978	PPPCCCCCCCPP	MANUAL	2 890	JUN 14	3	OCT 01	18 400	APR 12	184 000	---	---	---
1977	CCCCCCCCCCCC	MANUAL	5 670	MAY 23	4	DEC 18	55 800	MAY 23	392 000	1 590	1 590	---
1978	CCCCCCCCCCC	MANUAL	7 780	SEP 08	2	JAN 05	40 100	SEP 08	654 000	2 670	2 130	25.4
1979	CCCCCCCCCC--	MANUAL	3 970	JUL 23	2	AUG 18	18 000	JUL 23	110 000	447	1 570	40.9
1980	--CCCCCCCC--	MANUAL	5 520	JUL 28	2	MAY 16	48 500	AUG 08	833 000	3 400	2 030	31.8
1981	--PCCCCCCCP-	MANUAL	17 900	MAY 07 *	4	OCT 04	148 000	AUG 01 *	1 220 000 *	---	---	---
1982	--CCCCCCCC--	MANUAL	3 330	JUL 03	5	SEP 23	76 300	JUL 08	858 000	3 500	2 320	25.0
1983	---CCCCCCC--	MANUAL	5 330	JUL 08	1	OCT 11	64 000	JUL 08	423 000	---	---	---
1984	---CCCCCCC--	MANUAL	2 380	JUN 10	0	APR 30	7 170	JUN 09	110 000	---	---	---
1985	---PPPPPPP--	MANUAL	1 450	APR 05	5	JUL 18	---	---	---	---	---	---
1986	---PPPPPPPP-	MANUAL	1 320	AUG 12	8	APR 21	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

RED DEER RIVER AT RED DEER - STATION NO. 05CC002

LOCATION: LAT 52 18 36 N LONG 113 48 57 W
DRAINAGE AREA: 11 800 km²
TYPE OF FLOW: REGULATED SINCE 1983
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 23	08:40	4.0	21.8	10LB	DH59	5	251														
MAY 21	14:30	5.0	234	10LB	DH59	524	215														
JUN 17	15:20	15.0	85.8	10LB	DH59	19	186														
JUL 15	13:50	16.0	72.8 H	10LB	DH59	21	192														
JUL 20	09:30	13.0	381	10LB	DH59	328	180	17	25	33	44	55	71	82	97	100			29	45	26
AUG 13	09:30	15.0	57.3	10LB	DH59	13	206														
SEP 10	08:20	11.0	48.3 H	10LB	DH59	4	227														
OCT 08	10:00	5.0	119	10LB	DH59	30	238														
NOV 04	08:50	5.0	44.4	10LB	DH59	3	250														

NOTE - SINGLE VERTICAL LOCATED AT 10LB (ONE QUARTER THE DISTANCE FROM THE LEFT BANK) FOR 1986

DISCHARGE SYMBOL(S): H - DAILY MEAN

ALBERTA

RED DEER RIVER AT RED DEER - STATION NO. 05CC002

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY APR-OCT MEAN LOAD (TONNES)	SUMMARY APR-OCT HISTORICAL MEAN LOAD (TONNES)	SUMMARY APR-OCT HISTORICAL STANDARD ERROR OF MEAN %
1970	-----PP-----	MANUAL	103	JUN 04	12	JUL 17	---	---	---	---	---	---
1971	--CCCCCCCCC	MANUAL	1 480	APR 15	0	OCT 12 *	41 400	APR 15	274 000	1 270	1 270	---
1972	CCCCCCCCCCC	MANUAL	2 750	JUN 26	0	AUG 28	154 000	JUN 26 *	506 000	2 340	1 810	29 6
1973	CCCCCCCCCCC	MANUAL	1 390	MAY 28	3	SEP 09	31 700	MAY 28	222 000	1 010	1 540	26 4
1974	--CCCCCCC--	MANUAL	1 460	JUN 18	1	OCT 28	28 500	JUN 18	352 000	1 850	1 570	18 4
1975	--PCCCCCC--	MANUAL	426	APR 21	1	APR 14	7 490	APR 20	56 800	285	1 310	26 2
1976	--CCCCCCCC-	MANUAL	836	AUG 11	1	OCT 30	7 140	AUG 11	50 400	233	1 130	29 4
1977	---CCCCCCCC	MANUAL	253	MAY 17	1	DEC 14	3 800	APR 08	52 000	242	1 000	30 8
1978	CCCCCCCCCCC	MANUAL	1 370	JUN 07	0	NOV 07	21 900	JUN 07	131 000	589	950	28 6
1979	PP-CCCCCCP-	MANUAL	759	MAY 28	2	SEP 14	7 480	MAY 28	47 500	222	869	29 1
1980	--CCCCCCC--	MANUAL	1 140	APR 16	4	MAR 27	16 800	APR 16	142 000	682	848	26 8
1981	---CCCCCC--	MANUAL	3 080	JUL 31 *	4	APR 18	148 000	JUL 31	740 000 *	3 460	1 090	28 8
1982	---CCCCCC--	MANUAL	850	APR 23	2	OCT 25	19 500	JUL 06	206 000	863	1 080	26 5
1983	---CCCCCC--	MANUAL	906	APR 26	2	AUG 13	10 400	APR 27	48 400	226	1 010	26 9
1984	--PCCCCCC--	MANUAL	52	SEP 28	2	JUN 05	235	SEP 23	6 350	29 0	940	27 8
1985	---PPPPPPPP-	MANUAL	143	SEP 13	2	MAY 28	---	---	---	---	---	---
1986	---PPPPPPPP-	MANUAL	524	MAY 21	3	NOV 04	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

RED DEER RIVER BELOW BURNT TIMBER CREEK - STATION NO. 05CA005

LOCATION LAT 51 39 02 N LONG 115 01 00 W
DRAINAGE AREA 2 250 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE IN MILLIMETRES 002	004	008	016	031	062	125	250	500	1 00	2 00	PERCENT SAND	SILT	CLAY
APR 09	11 30	2.0	7.77		MID	X	DIP	1		239														
APR 24	12 10	3.0	7.27		MID	X	DIP	3		252														
MAY 26	11 45	10.0	90.3		MID	X	D49	261	C	185														
MAY 27	14 45	7.0	137		25.0	X	D49	723		139	10	18	30	42	80	71	83	95	100					
MAY 29	13 00	6.0	168		25.0	X	D49	1050		145	10	18	29	40	65	88	78	94	100			29	55	16
JUN 11	12 15	7.0	81.7		35.0	K	D49	71		176												32	53	15
JUN 20	10 50	6.0	55.7	H	15.0	K	DIP	24		172														
JUL 16	12 20	8.0	54.8		MID	X	D49	15		191														
AUG 14	13 15	11.0	45.5		.21	0 K	D49	11		205														
SEP 17	12 30	8.0	25.9		MID	X	DIP	8		217														
OCT 15	14 45	4.0	32.4		15.0	K	DIP	4		222														
NOV 05	13 20	3.0	19.5		MID	X	DIP	1		232														

NOTE SINGLE VERTICAL IS UNDETERMINED FOR 1986

DISCHARGE SYMBOL(S) H - DAILY MEAN
CONCENTRATION SYMBOL(S) C - COARSE MATERIAL PRESENT
VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY HISTORICAL STANDARD ERROR OF MEAN %
1974	------P-P---	MANUAL	43	JUL 29	8	SEP 03	---	---	---	---	---	---
1975	----P-P-----	MANUAL										
1976	----PPP-----	MANUAL	24	JUL 31	2	MAY 29	---	---	---	---	---	---
1977	-----PPP----	MANUAL	366	JUL 01	3	MAY 19	---	---	---	---	---	---
1978	----PPP-PP--	MANUAL	179	JUN 02	7	AUG 10	---	---	---	---	---	---
1979	----PPPP-P--	MANUAL	730	JUN 05	4	SEP 05	---	---	---	---	---	---
			342	AUG 21	2	OCT 02	---	---	---	---	---	---
1980	----PPPPP---	MANUAL										
1981	----PP-PP---	MANUAL	81	JUN 09	3	SEP 25	---	---	---	---	---	---
1982	----P-PPPP--	MANUAL	107	AUG 25	3	SEP 28	---	---	---	---	---	---
1983	---PP-PPP---	MANUAL	18	JUL 05	1	OCT 28	---	---	---	---	---	---
1984	----P-PP-P--	MANUAL	286	MAY 30	0	SEP 27 *	---	---	---	---	---	---
			23	AUG 03	3	JUL 10	---	---	---	---	---	---
1985	---PPPPPPP--	MANUAL										
1986	---PPPPPPPP-	MANUAL	81	SEP 16	3	APR 29	---	---	---	---	---	---
			1 050	MAY 29 *	1	APR 08	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

RED DEER RIVER NEAR BINDLOSS - STATION NO 05CK004

LOCATION LAT 50 54 10 N LONG 110 17 50 W
DRAINAGE AREA 44 700 km²
TYPE OF FLOW REGULATED SINCE 1908
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES 002	004	008	016	031	062	125	250	500	1 00	2 00	PERCENT SAND	SILT	CLAY
MAR 25	15 30	3 0	57 4	42 0	DH59	203															
APR 15	10 30	5 0	30 7	42 0	DH59	83	288														
MAY 13	09 58	8 0	40 8	42 0	DH59	855	358														
MAY 28	13 42	11 0	209	42 0	DH59	882	248	17	19	29	36	51	85	84	98	100			35	46	19
JUN 16	16 00	18 0	131	42 0	DH59	516	235														
JUL 22	19 55	20 0	535	42 0	DH59	2440	211	9	15	21	29	40	56	79	87	100			44	41	15
AUG 19	10 45	19 0	83 3	42 0	DH59	335	285														
SEP 24	16 08	10 0	99 2	42 0	DH59	517 C															
OCT 02	11 20	9 0	243	42 0	DH59	1110 C	279														
NOV 04	11 29	3 0	63 8	42 0	DH59	315	245														

NOTE SINGLE VERTICAL LOCATED AT 42 METRES FOR 1986

CONCENTRATION SYMBOL(S) C - COARSE MATERIAL PRESENT

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1966	----CCCCCCCC	MANUAL	11 800	JUL 05 *	35	NOV 03	298 000	JUL 07	1 850 000	---	---	---
1967	CCCCCCCCCCCC	MANUAL	5 000	JUN 04	2	JAN 24	200 000	JUN 04	2 410 000	9 810	9 810	---
1968	CCCCCCCCCCCC	MANUAL	5 890	JUL 25	11	DEC 10	70 300	JUL 25	843 000	3 420	6 820	48 3
1969	CCCCCCCCCCCC	MANUAL	8 840	APR 08	1	MAR 11 *	377 000	APR 09	4 710 000	19 200	10 800	62 4
1970	CCCCCCCCCCCC	MANUAL	11 200	JUN 18	11	MAR 19	345 000	JUN 18	2 930 000	11 900	11 100	29 3
1971	CCCCCCCCCCCC	MANUAL	7 710	APR 16	14	NOV 16	517 000	APR 16 *	4 610 000	18 800	12 600	23 4
1972	CCCCCCCCCCCC	MANUAL	4 390	JUN 29	9	NOV 27	195 000	JUN 29	1 600 000	6 500	11 600	22 6
1973	CCCCCCCCCCCC	MANUAL	8 470	JUN 19	7	FEB 23	122 000	JUN 19	1 570 000	6 400	10 900	21 4
1974	CCCCCCCCCCCC	MANUAL	8 700	APR 16	5	FEB 19	344 000	APR 19	5 280 000 *	21 900	12 200	19 8
1975	CCCCCCCCCCCC	MANUAL	4 790	APR 24	12	DEC 17	155 000	APR 24	1 160 000	4 650	11 400	20 1
1976	CCCCCCCCCCCC	MANUAL	8 690	AUG 19	4	JAN 28	136 000	AUG 19	887 000	3 610	10 800	20 7
1977	CCCCCCCCCCCC	MANUAL	8 020	SEP 24	7	FEB 07	84 800	SEP 23	585 000	2 370	9 830	21 6
1978	CCCCCCCCCCCC	MANUAL	8 380	SEP 14	11	DEC 13	85 900	APR 02	1 640 000	6 680	9 570	20 4
1979	CCCCCCCCC--	MANUAL	2 120	AUG 08	10	JAN 02	10 300	AUG 06	305 000	1 240	8 930	21 3
1980	--CCCCCCC--	MANUAL	6 070	AUG 10	35	MAY 12	99 800	APR 18	1 850 000	7 580	8 830	20 0
1981	--PCCCCCCC-	MANUAL	6 440	MAY 11	21	OCT 27	126 000	AUG 04	1 710 000	---	---	---
1982	---CCCCCCP-	MANUAL	5 080	SEP 28	56	SEP 18	83 800	JUL 08	1 750 000	---	---	---
1983	--PCCCCCCC--	MANUAL	3 340	JUL 05	16	OCT 31	42 300	JUL 12	509 000	---	---	---
1984	--PCCCCCCC--	MANUAL	5 910	SEP 14	46	JUL 24	18 100	SEP 15	388 000	---	---	---
1985	---PPPPPPP--	MANUAL	2 950	SEP 18	52	JUL 15	---	---	---	---	---	---
1986	--PPPPPPPPP-	MANUAL	2 440	JUL 22	83	APR 15	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

SAND RIVER NEAR THE MOUTH - STATION NO 06AB001

LOCATION LAT 54 28 16 N LONG 111 11 08 W
DRAINAGE AREA 4 910 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES 002	004	008	016	031	062	125	250	500	1 00	2 00	PERCENT SAND	SILT	CLAY
JUN 02	17 40	22 0	12 8	WERB	X DIP	18	195														
AUG 06	15 30	20 0	39 2	WERB	X DIP	62	178														

NOTE SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

ALBERTA

SAND RIVER NEAR THE MOUTH - STATION NO. 06AB001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1984	---PPP-P----	MANUAL	180	JUN 07 *	8	AUG 30	---	---	---	---	---	---
1985	---PP-P--P--	MANUAL	80	APR 23	6	OCT 01 *	---	---	---	---	---	---
1986	-----P-P----	MANUAL	82	AUG 08	18	JUN 02	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

SHEEP RIVER AT BLACK DIAMOND - STATION NO. 05BL014

LOCATION LAT 50 41 14 N LONG 114 14 34 W
DRAINAGE AREA 595 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 26	14 50	3.5	1.73	3.8	X	DIP	14	228														
APR 26	11 50	6.5	2.29	11.0	X	DH48	6	212														
MAY 22	12 50	9.0	21.3	12.0	X	DH48	385	180	11	21	35	57	75	84	91	98	100			15	63	21
JUN 24	09 50	12.0	7.85	4.2	X	DH48	6	184														
JUL 14	14 55	15.5	5.28	4.4	X	DH48	11	205														
AUG 27	09 15	11.5	2.80	2.8	X	DH48	2	220														
SEP 22	14 25	7.5	4.84	5.0	X	DH48	5	202														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1985

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1974	------PP-PP-	MANUAL	4	JUL 29	1	OCT 01	---	---	---	---	---	---
1975	---P-PPPPP--	MANUAL	180	JUN 28	1	SEP 29	---	---	---	---	---	---
1976	---PPPPPP---	MANUAL	2 730	AUG 05 *	0	SEP 24 *	---	---	---	---	---	---
1977	---PPPPPP---	MANUAL	80	SEP 26	1	JUL 28	---	---	---	---	---	---
1978	----PP-PP---	MANUAL	727	JUN 08	3	SEP 25	---	---	---	---	---	---
1979	---PPPPPP---	MANUAL	21	MAY 30	0	AUG 30	---	---	---	---	---	---
1980	---PP-PP-P--	MANUAL	1 340	MAY 26	1	OCT 08	---	---	---	---	---	---
1981	--PPPPPPP---	MANUAL	1 410	MAY 26	6	SEP 26	---	---	---	---	---	---
1982	---PPPPPP---	MANUAL	137	MAY 26	2	AUG 23	---	---	---	---	---	---
1983	-----PPPP---	MANUAL	128	MAY 30	1	AUG 31	---	---	---	---	---	---
1984	-----PP-PP---	MANUAL	91	JUN 09	3	SEP 05	---	---	---	---	---	---
1985	-----PPPPP---	MANUAL	1 820	SEP 13	11	JUL 17	---	---	---	---	---	---
1986	--PPPPPPP---	MANUAL	395	MAY 22	2	AUG 27	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

SIFFLEUR RIVER NEAR THE MOUTH - STATION NO. 05DA002

LOCATION LAT 53 02 39 N LONG 115 23 02 W
DRAINAGE AREA 515 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 28	13 30	8.5	69.4	WELR	X	DIP	388	108														
JUN 18	15 00	8.0	38.8	10.0	X	DH59	49	99														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

SIFFLEUR RIVER NEAR THE MOUTH - STATION NO. 05DA002

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1975	---PP-PP-P---	MANUAL	32	JUL 10	0	AUG 27 *	---	---	---	---	---	---
1976	----PPPPPP--	MANUAL	17	JUL 20	1	OCT 26	---	---	---	---	---	---
1977	----PPPPP-P-	MANUAL	11	JUL 27	0	MAY 31	---	---	---	---	---	---
1978	---PPP-PP---	MANUAL	11	JUN 23	0	APR 24	---	---	---	---	---	---
1979	----PPPPPPP-	MANUAL	28	MAY 24	0	JUN 27	---	---	---	---	---	---
1980	---PPP-PP---	MANUAL	43	JUN 24	4	APR 22	---	---	---	---	---	---
1981	----PPPPPP--	MANUAL	84	JUL 28	2	OCT 20	---	---	---	---	---	---
1982	---PPPPPPP--	MANUAL	11	JUL 08	2	APR 28	---	---	---	---	---	---
1983	----PPPPPP--	MANUAL	18	JUN 02	1	SEP 19	---	---	---	---	---	---
1984	---PPPPPP---	MANUAL	23	MAY 31	1	SEP 25	---	---	---	---	---	---
1985	----PP-P-----	MANUAL	7	AUG 01	2	JUN 28	---	---	---	---	---	---
1986	----PP------	MANUAL	368	MAY 29 *	49	JUN 19	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

SIMONETTE RIVER NEAR GODDWIN - STATION NO. 07GF001

LOCATION: LAT 55 08 30 N LONG 118 10 30 W
DRAINAGE AREA: 5 050 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
APR 24	13:10	4.0	88.3	91.0	DH59	981	169	27	33	51	66	79	86	92	99				16	53	33
MAY 22	10:55	10.0	103	91.0	DH59	830	182	19	24	39	50	65	76	87	98				24	52	24
JUN 17	17:05	18.5	51.8	91.0	DH59	331	198														
JUL 15	10:15	15.0	25.7	56.0 X	DH48	166	170														
AUG 20	12:45	18.0	6.17	52.0 X	DH48	8	284														
SEP 24	09:40	11.0	8.84	MID X	DH48	7	242														
OCT 29	11:20	1.0	12.5	MID X	DH48	12	207														

NOTE - SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1974	--------P-P-	MANUAL	17	NOV 07	11	SEP 19	---	---	---	---	---	---
1975	---PPPPPPP--	MANUAL	972	APR 28	4	AUG 19	---	---	---	---	---	---
1976	---PPPP------	MANUAL	4 300	APR 08	24	JUL 28	---	---	---	---	---	---
1977	---PPPP-PP---	MANUAL	2 680	APR 11	18	OCT 25	---	---	---	---	---	---
1978	----PPPPPP---	MANUAL	1 200	MAY 02	8	AUG 30	---	---	---	---	---	---
1979	---PPPPPPP--	MANUAL	3 780	JUN 18	8	OCT 30	---	---	---	---	---	---
1980	---P-PPPP---	MANUAL	3 480	JUN 07	40	JUL 24	---	---	---	---	---	---
1981	---P--P-PP---	MANUAL	467	APR 28	3	SEP 04 *	---	---	---	---	---	---
1982	----P-PP-P---	MANUAL	2 980	JUL 15	42	OCT 05	---	---	---	---	---	---
1983	---PPPPP----	MANUAL	7 230	JUL 15 *	37	AUG 30	---	---	---	---	---	---
1984	---P-PPPP---	MANUAL	738	APR 17	9	AUG 24	---	---	---	---	---	---
1985	---PPPPPPP--	MANUAL	908	APR 18	3	JUL 23	---	---	---	---	---	---
1986	---PPPPPPP--	MANUAL	830	MAY 22	7	SEP 24	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

ALBERTA

SLAVE RIVER AT FITZGERALD - STATION NO. 07NB001

SUSPENDED SEDIMENT FOR 1988

LOCATION: LAT 59 52 20 N LONG 111 35 00 W
DRAINAGE AREA: 908 000 km²
TYPE OF FLOW: REGULATED SINCE 1968
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 13 600 000 TONNES FOR THE PERIOD MAY 26 TO OCT 31

REMARKS:

DAY	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	JUL DAILY DISCHARGE (m³/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	DAY
1	3 600 B			5 170	750	335 000	5 150	852	290 000	1
2	3 700 B			5 130	849 S	288 000	5 090	851 S	286 000	2
3	3 780 B			5 210	823 S	235 000	4 870	505	212 000	3
4	3 750 B			5 570	580 S	289 000	4 750	357 S	147 000	4
5	3 710 B			5 720	535 S	284 000	4 820	281 S	105 000	5
6	3 700 B			5 740	813 S	304 000	4 590	240 S	95 200	6
7	3 710 B			5 720	797 S	384 000	4 350	235 S	88 300	7
8	3 740 B			5 890	1 080 S	531 000	4 210	211 S	76 700	8
9	3 880 B			5 670	1 090 S	534 000	4 170	204 S	73 500	9
10	4 200 B			5 600	851 S	417 000	4 140	184 S	58 700	10
11	4 400 B			5 340	703 S	324 000	4 120	128 S	44 800	11
12	4 600 B			5 230	620 S	280 000	4 120	118	41 300	12
13	4 800 B			5 080	554 S	243 000	4 100	116	41 100	13
14	4 850 B			4 930	484	206 000	4 100	116 S	41 100	14
15	4 900			4 970	420 S	180 000	4 180	117 S	42 100	15
16	4 800			5 000	372 S	161 000	4 300	115 S	43 100	16
17	4 670			4 950	292	125 000	4 290	125 S	46 300	17
18	4 550			4 850	248 S	103 000	4 230	135	49 300	18
19	4 490			4 660	224	84 100	4 180	142	51 000	19
20	4 550			4 730	207 S	84 800	4 090	148	51 200	20
21	4 680			4 470	208 S	80 300	4 080	118 S	41 400	21
22	4 770			4 510	218 S	84 900	4 120	127 S	46 200	22
23	4 830			4 840	233 S	93 400	4 510	141 S	54 900	23
24	4 840			4 780	237 S	97 800	5 050	175	78 400	24
25	4 850			5 030	207 S	90 000	5 390	228 S	106 000	25
26	4 880	425 S	179 000	5 260	220 S	100 000	5 480	279	132 000	26
27	4 970	511 S	219 000	5 320	250 S	115 000	5 400	343	160 000	27
28	5 070	588 S	249 000	5 350	319	147 000	5 250	453 S	205 000	28
29	5 350	664	307 000	5 320	404	186 000	5 080	600 E	263 000	29
30	5 340	752 S	347 000	5 220	516	234 000	4 950	700 E	299 000	30
31	5 280	779 S	384 000				4 770	850 E	288 000	31
TOTAL	139 320		1 695 000	155 070		6 600 300	141 850		3 537 300	TOTAL

DAY	AUG DAILY DISCHARGE (m³/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m³/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m³/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	DAY
1	4 640			3 110	142 E	38 200	3 210	119 S	33 000	1
2	4 540			3 140	132 S	35 800	3 240	100 S	28 000	2
3	4 460			3 140	116 S	31 200	3 180	85 S	23 100	3
4	4 380			3 050	84 S	22 200	3 170	84 S	23 700	4
5	4 240			3 050	83 S	21 900	3 170	87 S	23 800	5
6	4 130			3 130	85	23 000	3 230	112 S	31 300	6
7	4 050			3 240	83	23 200	3 410	109 S	32 100	7
8	4 020			3 360	81	23 600	3 510	118 S	35 600	8
9	4 080			3 370	82 S	23 800	3 480	128 S	38 500	9
10	4 050			3 380	80 S	23 800	3 480	128 S	38 600	10
11	3 970			3 380	113 S	33 000	3 520	132 S	40 100	11
12	3 890			3 240	131 S	36 700	3 490	165 S	49 800	12
13	3 810			3 020	126 S	32 800	3 520	210 S	63 900	13
14	3 780			2 970 A	119 S	30 500	3 500	178 S	54 700	14
15	3 550			2 950 E	107 S	27 400	3 630	158 S	48 900	15
16	3 370			3 080 E	92 S	24 300	3 700	142 S	45 400	16
17	3 410			3 050 E	83 S	21 800	3 710	127 S	40 700	17
18	3 440			3 010 E	85 S	17 900	3 700	133 S	39 300	18
19	3 530			2 930 E	83 S	15 900	3 530	112 S	35 100	19
20	3 450			2 900 E	58 S	14 000	3 550	89 S	30 400	20
21	3 390			2 880 E	58	14 500	3 470	93 S	27 800	21
22	3 380			2 900 E	70 S	17 500	3 410	105 S	30 800	22
23	3 320			2 910 E	85 S	21 400	3 380	111 S	32 600	23
24	3 380			2 920 E	88 S	22 200	3 330	88	28 200	24
25	3 350	121 S	35 000	2 850 E	91 S	23 200	3 320	97 S	27 800	25
26	3 300			2 880 E	88 S	22 700	3 310 B	106 S	29 400	26
27	3 320			3 020 E	112 S	29 200	3 100 B	78 S	20 400	27
28	3 270			3 080 E	158 S	41 500	2 850 B	83 S	19 100	28
29	3 280			3 120 A	155 S	42 100	2 810 B	85 E	19 400	29
30	3 220			3 160	134 S	38 600	2 700 B	80 E	11 700	30
31	3 040						2 590 B	45 E	10 100	31
TOTAL	118 010		35 000	82 410		784 100	103 410		1 012 300	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

SLAVE RIVER AT FITZGERALD - STATION NO. 07NB001

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 26	06 00	10.0	4840		WELB	PUMP	408	156														
MAY 26	06 05	10.0	4840		WELB	PUMP	420	151														
MAY 26	06 15	10.0	4840		WELB	D49	425	162	26	39	60	70	78	84	91	98	100			16	45	39
MAY 26	06 30	10.0	4850		WELB	PUMP	434															
MAY 26	06 35	10.0	4850		WELB	PUMP	409															
MAY 27	08 35	11.0	4970		WELB	PUMP	504															
MAY 28	06 30	11.0	5000		WELB	PUMP	545															
MAY 30	01 45	12.0	5350		WELB	PUMP	727															
MAY 31	13 30	12.0	5240		WELB	PUMP	781															
JUN 02	08 45	12.0	5170		WELB	PUMP	575	175														
JUN 02	23 00	12.0	5040		WELB	PUMP	575															
JUN 03	11 30	13.0	5200		WELB	PUMP	500															
JUN 04	00 15	13.0	5430		WELB	PUMP	550															
JUN 05	14 55	13.0	5760		WELB	PUMP	517															
JUN 06	00 45	13.0	5780		WELB	PUMP	592															
JUN 06	10 30	14.0	5720		WELB	PUMP	807															
JUN 07	04 55	15.0	5690		WELB	PUMP	697															
JUN 07	10 30	15.0	5730		WELB	PUMP	768															
JUN 08	00 45	15.0	5730		WELB	PUMP	895															
JUN 08	15 30	15.0	5880		WELB	PUMP	1080															
JUN 09	00 01	15.0	5850		WELB	PUMP	1270															
JUN 09	08 45	15.0	5860		WELB	PUMP	1070															
JUN 10	00 15	15.0	5890		WELB	PUMP	1000															
JUN 10	11 05	15.0	5840		WELB	PUMP	831															
JUN 10	23 15	15.0	5450		WELB	PUMP	784															
JUN 11	08 45	15.0	5320		WELB	PUMP	702															
JUN 11	23 15	15.0	5330		WELB	PUMP	883															
JUN 12	08 00	15.0	5250		WELB	PUMP	827															
JUN 13	00 30	14.0	5180		WELB	PUMP	588															
JUN 13	13 20	14.0	5050		WELB	PUMP	553															
JUN 15	23 30	14.0	5020		WELB	PUMP	393															
JUN 16	08 00	14.0	5010		WELB	PUMP	392	136														
JUN 17	23 15	14.0	4900		WELB	PUMP	324															
JUN 18	07 00	14.0	4870		WELB	PUMP	249															
JUN 18	23 15	15.0	4840		WELB	PUMP	240															
JUN 20	04 30	15.0	4840		WELB	PUMP	209															
JUN 21	02 45	15.0	4490		WELB	PUMP	206															
JUN 22	08 25	15.0	4480		WELB	PUMP	217	146														
JUN 23	12 50	15.0	4850		WELB	PUMP	234															
JUN 24	11 30	16.0	4790		WELB	PUMP	247															
JUN 24	23 15	16.0	4880		WELB	PUMP	218															
JUN 25	08 45	16.0	5010		WELB	PUMP	206															
JUN 25	23 20	16.0	5140		WELB	PUMP	194															
JUN 26	01 30	16.0	5180		WELB	PUMP	225															
JUN 26	23 20	16.0	5320		WELB	PUMP	231															
JUN 27	12 00	16.0	5300		WELB	PUMP	243	131														
JUL 02	08 30	18.0	5110		WELB	PUMP	678															
JUL 04	01 00	18.0	4790		WELB	PUMP	406															
JUL 05	03 15	18.0	4810		WELB	PUMP	307															
JUL 05	11 00	18.0	4830		WELB	PUMP	250															
JUL 06	03 00	18.0	4730		WELB	PUMP	238															
JUL 07	08 30	18.0	4360		WELB	PUMP	236															
JUL 07	23 30	18.0	4280		WELB	PUMP	232															
JUL 08	12 30	18.0	4210		WELB	PUMP	207															
JUL 08	23 30	18.0	4170		WELB	PUMP	197															
JUL 09	11 00	18.0	4180		WELB	PUMP	213															
JUL 10	23 30	18.0	4130		WELB	PUMP	140															
JUL 11	10 00	19.0	4120		WELB	PUMP	127															
JUL 14	09 30	20.0	4080		WELB	PUMP	117	148														
JUL 15	08 30	20.0	4150		WELB	PUMP	120															
JUL 16	10 00	20.0	4300		WELB	PUMP	117															
JUL 17	09 15	20.0	4310		WELB	PUMP	128															
JUL 21	04 00	20.0	4050		WELB	PUMP	131															
JUL 21	10 00	19.0	4060		WELB	PUMP	113	140														
JUL 22	04 00	19.0	4070		WELB	PUMP	120															
JUL 22	10 00	18.0	4080		WELB	PUMP	124															
JUL 22	23 45	18.0	4260		WELB	PUMP	142															
JUL 23	12 15	17.0	4500		WELB	PUMP	136															
JUL 25	01 10	17.0	5290		WELB	PUMP	202															
JUL 28	01 00	18.0	5330		WELB	PUMP	381	152														
JUL 28	10 45	18.0	5270		WELB	PUMP	453															
AUG 25	01 50	14.0	3350		WELB	PUMP	121															
SEP 02	08 00	14.0	3140		WELB	PUMP	132															
SEP 03	08 50	14.0	3150		WELB	PUMP	123															
SEP 04	09 25	13.0	3050		WELB	PUMP	81	138														
SEP 05	05 30	13.0	3040		WELB	PUMP	94															
SEP 05	06 00	13.0	3040		WELB	D49	86	183														
SEP 05	06 10	13.0	3040		WELB	PUMP	87															
SEP 09	01 30	13.0	3400		WELB	PUMP	82															
SEP 10	01 00	13.0	3340		WELB	PUMP	81															
SEP 11	01 20	13.0	3410		WELB	PUMP	86															
SEP 12	01 30	13.0	3340		WELB	PUMP	134	136														
SEP 13	06 30	13.0	3030		WELB	PUMP	125															
SEP 14	01 00	12.0	2970	Y	WELB	PUMP	126															
SEP 15	06 00	11.0	2960	Y	WELB	PUMP	112															
SEP 16	05 00	11.0	3080	Y	WELB	PUMP	95															
SEP 17	11 00	11.0	3050	Y	WELB	PUMP	85															
SEP 18	01 00	10.0	3010	Y	WELB	PUMP	72															
SEP 19	06 45	11.0	2930	Y	WELB	PUMP	68	142														
SEP 20	06 00	11.0	2900	Y	WELB	PUMP	57															
SEP 22	01 00	10.0	2900	Y	WELB	PUMP	58															
SEP 23	00 30	10.0	2910	Y	WELB	PUMP	85															
SEP 24	01 00	10.0	2920	Y	WELB	PUMP	85															
SEP 25	01 00	10.0	2950	Y	WELB	PUMP	93															
SEP 26	08 00	9.0	2980	Y	WELB	PUMP	88	138														
SEP 27	01 00	9.0	3020	Y	WELB	PUMP	86															
SEP 28	02 30	9.0	3080	Y	WELB	PUMP	145															
SEP 29	00 30	9.0	3120	Y	WELB	PUMP	168															
SEP 30	06 30	8.0	3140		WELB	PUMP	138															
OCT 01	08 00	10.0	3210		WELB	PUMP	127															
OCT 02	01 00	9.0	3230		WELB	PUMP	105															
OCT 03	04 30	8.0	3190		WELB	PUMP	85	127														

NOTE - SINGLE VERTICAL LOCATED AT WELB (WATER'S EDGE LEFT BANK) FOR 1986

DISCHARGE SYMBOL(S) Y - DAILY MEAN, MANUAL GAUGE Y - DAILY MEAN, ESTIMATED

CONTINUED

SLAVE RIVER AT FITZGERALD - STATION NO. 07NB001 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
OCT 04	08:30	9.0	3170		WELB	PUMP	98															
OCT 05	04:00	8.0	3190		WELB	PUMP	89															
OCT 06	00:30	5.0	3170		WELB	PUMP	117															
OCT 07	05:00	4.0	3390		WELB	PUMP	115															
OCT 07	05:01	4.0	3390		WELB	PUMP	104															
OCT 08	00:30	4.0	3470		WELB	PUMP	110															
OCT 09	00:30	4.0	3520		WELB	PUMP	128															
OCT 10	05:00	4.0	3480		WELB	PUMP	124	135														
OCT 11	01:00	4.0	3550		WELB	PUMP	130															
OCT 12	03:00	4.0	3500		WELB	PUMP	139															
OCT 13	01:00	3.0	3670		WELB	PUMP	218															
OCT 14	05:00	5.0	3590		WELB	PUMP	181															
OCT 15	01:00	5.0	3610		WELB	PUMP	183															
OCT 16	00:30	5.0	3650		WELB	PUMP	180															
OCT 17	09:00	5.0	3720		WELB	PUMP	128	127														
OCT 18	08:00	7.0	3890		WELB	PUMP	128															
OCT 19	01:00	5.0	3880		WELB	PUMP	115															
OCT 20	00:30	5.0	3580		WELB	PUMP	108															
OCT 21	01:00	5.0	3510		WELB	PUMP	88															
OCT 22	04:30	5.0	3420		WELB	PUMP	100															
OCT 23	00:30	5.0	3400		WELB	PUMP	111															
OCT 25	08:40	5.0	3330		WELB	PUMP	87	130														
OCT 26	03:00	5.0	3210	W	WELB	PUMP	120															
OCT 27	02:15	5.0	3100	W	WELB	PUMP	85															
OCT 28	02:55	3.0	2950	W	WELB	D49	83	134														

NOTE - SINGLE VERTICAL LOCATED AT WELB (WATER'S EDGE LEFT BANK) FOR 1986

DISCHARGE SYMBOL(S) W - DAILY MEAN, ICE CONDITIONS

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)		SUMMARY JUN-SEP MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1971	--------CCC--	MANUAL	389	AUG 04	108	OCT 21	152 000	AUG 01	5 280 000		---	---	---
1972	-----CCCC---	MANUAL	7 810	JUN 22 *	131	SEP 15	4 840 000	JUN 22 *	44 500 000	*	385 000	385 000	---
1973	----PCCCCP--	MANUAL	1 010	JUN 24	65	OCT 03	858 000	JUN 24	20 700 000		152 000	259 000	0.0
1974	-----CCCCC--	MANUAL	881	JUL 25	85	SEP 25	844 000	JUL 25	21 300 000		180 000	326 000	5.7
1975	----PCCCCC--	MANUAL	858	MAY 15	86	OCT 22	238 000	MAY 15	12 300 000		72 700	187 000	0.0
1976	----CCCCP---	MANUAL	3 080	JUL 08	54	AUG 05	1 840 000	JUL 08	25 300 000		---	---	---
1977	----CCCCCP--	MANUAL	720	MAY 20	28	SEP 27	384 000	MAY 19	14 800 000		88 500	184 000	8.7
1978	----CCCCC---	MANUAL	1 940	JUN 15	53	AUG 28	757 000	JUN 15	19 900 000		123 000	187 000	8.5
1979	----PCCCCC--	DUAL	1 210	JUN 09	45	OCT 23	851 000	JUN 09	33 100 000		174 000	189 000	5.8
1980	----CCCCCC--	AUTO	2 030	JUN 17	48	SEP 04	752 000	JUN 17	12 300 000		83 400	180 000	8.2
1981	----PCCCCC--	AUTO	800	JUN 10	28	AUG 27	287 000	JUN 10	7 480 000		48 300	138 000	0.0
1982	-----CCCCC--	AUTO	5 270	JUL 25	48	OCT 08	2 550 000	JUL 25	24 900 000		196 000	144 000	0.0
1983	----PCCCCP--	DUAL	1 580	JUL 03	52	SEP 14	795 000	JUL 28	28 200 000		187 000	149 000	0.0
1984	----CCCCCC--	DUAL	2 430	JUN 01	80	SEP 14	1 080 000	JUN 01	28 700 000		188 000	150 000	0.0
1985	----PCCCCC-P	DUAL	822	MAY 15	14	AUG 30 *	448 000	DEC 01	10 400 000		50 900	143 000	3.7
1986	----PCCPCC--	DUAL	1 270	JUN 09	87	SEP 20	534 000	JUN 09	13 800 000		---	---	---

AUTO - AUTOMATIC SAMPLING DUAL - MANUAL AND AUTOMATIC SAMPLING MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

SOUTH SASKATCHEWAN RIVER AT HIGHWAY NO. 41 - STATION NO. 05AK001

LOCATION LAT 50 44 15 N LONG 110 05 45 W
DRAINAGE AREA 65 000 km²
TYPE OF FLOW REGULATED
TYPE OF GAUGE MANUAL

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 29	12 50	5.0	144		110		D49	52	237													
MAY 12	14 47	8.0	124		110		D49	44	230													
MAY 28	09 55	10.0	423		110		D49	585	222	18	30	47	66	72	78	82	93	100		33	48	20
JUN 18	13 17	18.5	464		110		D49	358	200	7	14	28	40	57	66	77	97	100		34	52	14
JUL 15	13 30	20.0	80.4		110		D49	19	202													
AUG 13	13 08	12.0	53.3		110		D49	18	387													
SEP 21	12 05	10.0	93.8		110		D49	29	260													
OCT 2	14 15	10.0	191		85.0	M	D49	58	267													
OCT 2	14 30	10.0	191		85.0	M	D49	61	249													
OCT 21	15 05	10.0	191		110		D49	66	247													
OCT 21	15 10	10.0	191		105	M	D49	66	245													
OCT 21	15 15	10.0	191		130	M	D49	64	261													
OCT 21	15 20	10.0	191		155	M	D49	62	248													

NOTE - SINGLE VERTICAL LOCATED AT 110 METRES FOR 1986

VERTICAL SYMBOL(S) M - A SEDIMENT MEASUREMENT VERTICAL

SOUTH SASKATCHEWAN RIVER AT HIGHWAY NO. 41 - STATION NO 05AK001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY APR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1985	---PCCCCCCCC	MANUAL	1 980	JUN 08	8	SEP 19	195 000	JUN 08	2 430 000	---	---	---
1987	CCCCCCCCCCCC	MANUAL	3 880	MAY 11	5	SEP 06	564 000	JUN 03	7 480 000 *	34 700	34 700	---
1988	CCCCCCCCCCCC	MANUAL	2 020	JUN 09	3	AUG 11	107 000	JUN 09	1 180 000	5 330	20 000	73 4
1989	CCCCCCCCCCCC	MANUAL	3 290	JUN 30	4	SEP 23	452 000	JUL 02	4 550 000	20 500	20 200	42 0
1970	CCCCCCCCCCCC	MANUAL	3 740	JUN 17	2	SEP 06 *	417 000	JUN 17	2 700 000	12 500	18 300	34 4
1971	CCCCCCCCCCCC	MANUAL	1 840	JUN 10	2	SEP 05	170 000	JUN 10	2 350 000	10 800	18 800	30 4
1972	CCCCCCCCCCCC	MANUAL	4 180	MAR 18	3	JAN 27	281 000	JUN 04	4 720 000	19 500	17 200	24 4
1973	CCCCCCCCCCCC	MANUAL	1 450	JUN 17	2	JAN 10	48 100	JUN 17	720 000	3 270	15 200	28 7
1974	CCCCCCCCCCCC	MANUAL	5 360	MAY 04	2	OCT 19	350 000	MAY 04	4 090 000	19 000	15 700	22 6
1975	CCCCCCCCCCCC	MANUAL	5 100	JUN 23 *	2	JAN 07	1 880 000	JUN 23 *	7 450 000	34 700	17 800	21 2
1976	CCCCCCCCCCCC	MANUAL	1 310	MAY 15	2	SEP 25	70 800	AUG 10	1 300 000	5 850	18 800	21 6
1977	CCCCCCCCCCCC	MANUAL	1 300	JUN 16	3	APR 29	29 800	JUN 15	120 000	498	15 100	23 6
1978	CCCCCCCCCCCC	MANUAL	1 970	JUN 03	9	AUG 13	98 700	JUN 10	2 450 000	10 400	14 800	22 1
1979	---CCCCCCC--	MANUAL	1 720	MAY 30	2	SEP 01	102 000	MAY 30	1 150 000	5 400	14 000	22 1
1980	---CCCCCCC--	MANUAL	4 130	MAY 30	7	SEP 02	368 000	MAY 30	2 150 000	10 100	13 800	20 9
1981	--PCCCCCCCP-	MANUAL	4 430	MAY 19	11	SEP 22	578 000	MAY 28	4 590 000	21 400	14 300	19 1
1982	---CCCCCCC--	MANUAL	2 000	JUL 08	6	SEP 12	93 500	JUL 08	1 580 000	7 410	13 800	18 7
1983	--PCCCCCCC--	MANUAL	2 720	JUL 21	4	SEP 25	43 900	JUL 21	416 000	1 940	13 100	19 3
1984	---CCCCCCC--	MANUAL	527	JUN 26	5	MAY 05	9 100	JUN 26	118 000	552	12 400	20 0
1985	----PPPPPP--	MANUAL	457	SEP 17	5	SEP 09	---	---	---	---	---	---
1986	---PPPPPPP--	MANUAL	585	MAY 28	15	AUG 18	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

SOUTH SASKATCHEWAN RIVER AT MEDICINE HAT - STATION NO 05AJ001

LOCATION: LAT 50 02 35 N LONG 110 40 40 W
DRAINAGE AREA: 58 400 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
FEB 28	11 05	1.0	453	158	K	DH59	2600	228	28	40	63	74	98	100						0	60	40
MAR 04	10 15	3.0	327	133	K	DH59	533															
APR 01	17 10	9.0	185	80.0	K	DH59	82	243														
APR 23	14 10	11.0	97.0	80.0	K	DH59	17	221														
MAY 21	15 35	18.0	171	81.0	K	DH59	17	213														
MAY 29	09 45	15.0	453	72.0	K	DH59	408	184														
JUN 03	10 00	20.0	853	76.0	K	DH59	1180	185														
JUN 24	17 15	24.0	283	79.0	K	DH59	135	180														
JUL 29	12 50	18.0	188	185	K	DIP	38	208														
SEP 03	14 40	17.0	41.0	85.0	K	DIP	9	251														
SEP 30	17 08	12.0	218	188	K	DIP	640	313														
NOV 05	15 30	4.0	171	185	K	DIP	30	250														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1974	------PPPP--	MANUAL	88	JUL 15	9	SEP 11	---	---	---	---	---	---
1975	----PP-PPP--	MANUAL	2 930	JUN 23	5	SEP 15	---	---	---	---	---	---
1976	--PPPPPPPP--	MANUAL	493	MAY 11	1	MAY 05 *	---	---	---	---	---	---
1977	--P-PPPPPP--	MANUAL	53	MAY 24	11	JUN 29	---	---	---	---	---	---
1978	--PPP-PP---P	MANUAL	845	MAR 30	11	DEC 12	---	---	---	---	---	---
1979	----P-P-PP--	MANUAL	808	MAY 31	4	JUL 31	---	---	---	---	---	---
1980	---PPP-P-P--	MANUAL	3 020	MAY 29 *	24	AUG 29	---	---	---	---	---	---
1981	--P-P--PP---	MANUAL	1 780	MAY 28	17	SEP 28	---	---	---	---	---	---
1982	-----PP-PP--	MANUAL	345	JUN 23	42	OCT 27	---	---	---	---	---	---
1983	--PP-PPPP-P-	MANUAL	397	JUN 02	8	SEP 25	---	---	---	---	---	---
1984	---PPPP-PP--	MANUAL	113	SEP 10	4	MAY 15	---	---	---	---	---	---
1985	--PPPPPPPP--	MANUAL	889	MAY 29	11	JUL 31	---	---	---	---	---	---
1986	-PPPPPP-P-P-	MANUAL	2 800	FEB 28	9	SEP 03	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

STEEPBANK RIVER NEAR FORT MCMURRAY - STATION NO. 07DA005

LOCATION: LAT 57 00 14 N LONG 111 24 53 W
DRAINAGE AREA: 1 320 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 09	12:45	4.0	18.4	1ORB	DIP	189	126														
JUN 20	15:00	15.0	7.25	1ORB	DIP	43	188														
AUG 25	08:15	9.0	4.06	1ORB	DIP	4	212														

NOTE - SINGLE VERTICAL IS UNDETERMINED FOR 1986

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1975	-----PP-PP--	MANUAL	741	JUL 19	24	JUN 24	---	---	---	---	---	---
1976	---PP-PPP-P-	MANUAL	709	APR 15	6	NOV 05	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	631	APR 15	3	SEP 22	---	---	---	---	---	---
1978	---PPPPPP---	MANUAL	251	MAY 01	8	JUL 24	---	---	---	---	---	---
1979	----PPPPPP--	MANUAL	116	MAY 30	6	AUG 22	---	---	---	---	---	---
1980	---PPPPPPP--	MANUAL	128	SEP 19	8	JUN 27	---	---	---	---	---	---
1981	----P-PP----	MANUAL	50	JUL 16	3	AUG 28	---	---	---	---	---	---
1982	----PP-PP---	MANUAL	120	MAY 19	3	JUN 25	---	---	---	---	---	---
1983	-----P-PP---	MANUAL	11	JUN 22	3	AUG 07	---	---	---	---	---	---
1984	----P--PP---	MANUAL	75	AUG 11	2	SEP 21 *	---	---	---	---	---	---
1985	---P-P-P----	MANUAL	872	APR 30 *	3	AUG 20	---	---	---	---	---	---
1986	----PP-P----	MANUAL	189	MAY 09	4	AUG 25	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

SWAN RIVER NEAR KINUSO - STATION NO. 07BJ001

SUSPENDED SEDIMENT FOR 1986

LOCATION: LAT 55 19 00 N LONG 115 24 30 W
DRAINAGE AREA: 1 900 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 532 000 TONNES FOR THE PERIOD APR 18 TO OCT 31

REMARKS:

	APR			MAY			JUN			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	4.77 B			24.8	243 S	521	25.0	178	387	1
2	3.74 B			23.3	331	666	21.4	187 S	309	2
3	3.16 B			28.4	416 S	1 020	18.2	107 S	185	3
4	3.44 B			39.0	889	2 250	15.8	88 S	92.8	4
5	3.88 B			45.1	778 S	3 020	14.2	54 S	66.3	5
6	4.28 B			48.7	872 S	3 740	13.0	34 S	38.2	6
7	4.72 B			45.9	830 S	3 500	11.7	28 S	28.3	7
8	10.9 B			49.8	838 S	3 610	10.7	22 S	20.3	8
9	18.3 B			51.5	853 S	4 250	9.52	18 S	13.2	9
10	20.4 B			52.5	1 500 S	8 600	8.69	19 S	14.1	10
11	17.8			51.4	775 S	3 440	8.71	20 S	15.1	11
12	12.8			46.4	765 S	3 030	15.3	156 S	206	12
13	11.1			43.3	818 S	2 300	18.1	183 S	227	13
14	9.53			57.4	1 210 S	6 000	12.8	88 S	75.2	14
15	8.98			60.9	898 S	4 680	10.8	64 S	49.6	15
16	8.70			47.2	490 S	2 000	9.53	28 S	23.1	16
17	9.84			41.7	512 S	1 840	9.50	23 S	18.9	17
18	13.5	178 S	208	44.7	810 S	2 380	9.80	30 S	25.4	18
19	20.2	278	487	46.1	825 S	2 490	25.1	212 S	480	19
20	25.4	427 S	937	47.0	497 S	2 020	80.8	1 040	7 260	20
21	42.8	845	2 380	50.6	488 S	2 040	52.2	616 S	2 780	21
22	42.8	693 S	2 550	84.3	1 420 S	10 300	32.5	300	842	22
23	29.6	425 S	1 080	116	2 080 S	20 800	23.2	151 S	303	23
24	23.2	127	255	107	1 300 S	12 000	19.0	104	171	24
25	19.3	81 S	102	81.4	746 S	5 250	16.2	79	111	25
26	19.6	181	271	68.3	680 S	3 900	13.7	55	85.1	26
27	26.3	553 S	1 280	58.2	681 S	3 420	12.3	59 S	82.7	27
28	38.2	842	2 950	45.9	473 S	2 040	11.4	42 S	41.4	28
29	41.3	606 S	2 160	40.8	317 S	1 120	10.2	39 S	34.4	29
30	34.8	273 S	823	34.7	235 S	705	9.05	38 S	29.1	30
31				29.6	183 S	468				31
TOTAL	531.76		15 484	1 813.6		120 580	548.10		13 838.1	TOTAL

	JUL			AUG			SEP			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	8.14	30 S	21.1	23.7	118 S	242	2.34 A	17	3.44	1
2	7.40	31 S	19.8	19.4	98 S	164	2.35 A	17	3.45	2
3	6.66	18	9.21	16.7	91 S	131	2.87 A	18 S	3.97	3
4	5.27	13 S	7.04	83.0	1 870 S	10 200	3.58 A	15	4.64	4
5	17.1	276 S	408	50.5	1 030 S	4 490	3.18 A	12	3.30	5
6	32.0	571 S	1 580	32.3	341	952	2.77 A	11 S	2.83	6
7	21.8	241 S	454	23.5	200 S	406	2.53 A	11	2.40	7
8	16.6	87 S	125	18.5	144	230	2.30 A	10	1.99	8
9	17.3	136 S	203	15.8	98	131	2.20 A	10 S	1.90	9
10	23.4	262 S	530	13.9	63 S	51.5	1.88 A	11	1.88	10
11	34.2	551 S	1 630	12.2	36	37.9	2.33 A	13 S	2.62	11
12	59.2	1 020 S	5 220	10.5	37 S	33.6	3.82 A	18	5.28	12
13	52.4	436 S	1 970	9.18	45	35.7	6.18 A	18	8.54	13
14	48.2	388 S	1 650	8.18	43	30.4	4.77 A	19	7.83	14
15	104	1 520 S	13 700	7.10	37 S	22.7	4.00 A	25 S	8.84	15
16	195	3 510 S	59 100	6.91	38	17.3	3.80 A	20	5.24	16
17	200	1 890 S	29 200	6.84	21	12.4	3.67 A	16	4.80	17
18	289	3 420	85 400	6.15	16 S	9.63	3.34 A	11 S	3.17	18
19	275	3 480 S	82 700	5.49	16	8.54	3.22 A	11	3.08	19
20	128	1 410 S	15 300	4.81	17	7.08	3.09 A	11	2.94	20
21	69.8	781 S	4 770	4.52	15 S	5.86	2.87 A	11 S	3.82	21
22	46.8	477 S	1 930	4.21	11	4.00	2.89 A	13 S	3.02	22
23	36.5	380 S	1 200	3.90	10	3.37	2.58	13	2.90	23
24	77.1	1 420 S	9 480	3.85	14 S	4.42	2.49	13	2.80	24
25	54.3	894 S	3 280	3.37	14	4.08	2.62	15	3.27	25
26	37.7	324 S	1 080	3.20	13	3.58	3.47	19	3.84	26
27	32.6	237 S	858	3.06	12	3.18	4.44	37	37.2	27
28	29.3	186 S	471	2.87	12	2.98	23.4	874	1 770	28
29	31.1	184 S	494	2.73 A	12 S	2.83	28.0	1 090	3 640	29
30	27.1	158 S	365	2.56 A	13	2.88	20.1	835	1 450	30
31	26.8	122	272	2.45 A	14 S	2.96				31
TOTAL	2 008.77		333 176.15	391.22		17 262.86	155.88		5 998.28	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS S - SAMPLE(S) COLLECTED THIS DAY

ALBERTA

SWAN RIVER NEAR KINUSO - STATION NO. 07BJ001

SUSPENDED SEDIMENT FOR 1986

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	21.2	981	1 800							1
2	19.8	1 030	1 740							2
3	16.7	906	1 310							3
4	19.4	859 S	1 440							4
5	42.8	1 480	5 370							5
6	32.5	1 180	3 280							6
7	25.0	787	1 720							7
8	38.2	1 090	3 800							8
9	33.5	901	2 610							9
10	25.8	520	1 180							10
11	20.5	261	482							11
12	17.5	127	192							12
13	15.5	74	99.1							13
14	13.8	57 S	68.5							14
15	12.7	47	51.6							15
16	11.8	41	41.8							16
17	10.8	33	30.8							17
18	9.92	20	17.1							18
19	9.11	22 S	17.3							19
20	8.46	23	16.8							20
21	8.02	15	10.4							21
22	7.57	13	8.50							22
23	7.09	13	7.98							23
24	6.74	12	6.99							24
25	8.46	11	8.14							25
26	6.23	9	4.84							26
27	6.17	10 S	5.33							27
28	6.35	11	6.04							28
29	6.75	10	5.83							29
30	6.28	10	5.43							30
31	5.33 B	9	4.84							31
TOTAL	479.57		28 078.30							TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

SWAN RIVER NEAR KINUSO - STATION NO. 07BJ001

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR	18 15:15	8.0	14.8		28.0	DH59	193		116														
APR	20 15:50	7.0	28.9		28.0	DH59	456																
APR	22 15:35	3.0	37.7		28.0	DH59	888		85														
APR	23 16:00	3.0	25.2		28.0	DH59	315	C															
APR	25 13:10	3.5	20.6		28.0	DH59	82		97														
APR	27 09:50	8.0	26.1		28.0	DH59	540	C															
APR	29 15:47	3.0	43.2		28.0	DH59	256	C															
APR	30 16:20	3.0	32.0		28.0	DH59	317	C	116														
MAY	01 17:10	4.0	22.7		28.0	DH59	195	C															
MAY	03 14:18	5.0	30.1		28.0	DH59	462	C															
MAY	05 18:10	8.0	48.1		28.0	DH59	833	C															
MAY	06 17:10	8.0	51.2		28.0	DH59	845	C															
MAY	07 17:00	7.0	44.2		28.0	DH59	800	C															
MAY	08 17:13	7.0	54.6		28.0	DH59	1050		97	7	10	17	23	33	44	59	93	99	100		58	34	10
MAY	09 18:23	7.0	52.2		28.0	DH59	980		90	5	8	12	17	23	32	49	91	99	100		48	24	8
MAY	10 08:50	7.0	51.2		28.0	DH59	1620	C															
MAY	11 13:28	7.0	53.2		28.0	DH59	748	C															
MAY	12 16:32	7.0	47.3		28.0	DH59	893	C															
MAY	13 16:10	8.0	43.8		28.0	DH59	848	C	100														
MAY	14 16:31	7.0	88.3		28.0	DH59	1680	C	101														
MAY	15 19:32	7.0	57.3		28.0	DH59	527	C															
MAY	16 16:24	7.0	45.4		28.0	DH59	504	C															
MAY	17 20:04	10.0	42.6		28.0	DH59	511	C	92														
MAY	18 13:13	11.0	45.5		28.0	DH59	838	C															
MAY	19 11:02	10.0	45.2		28.0	DH59	802	C															
MAY	20 17:45	11.0	49.9		28.0	DH59	584	C	103														
MAY	21 20:48	8.0	52.9		28.0	DH59	593	C															
MAY	22 16:08	8.0	84.3	H	28.0	DH59	1900		100	8	13	20	28	43	61	79	95	100			39	48	13
MAY	22 16:10	8.0	84.3	H	28.0	DH59	1840		112	11	14	22	28	43	61	82	97	100			38	47	14
MAY	23 14:00	8.5	120		28.0	DH59	1820		107	7	12	18	26	42	60	79	97	100			40	48	12
MAY	24 20:21	13.0	88.4		28.0	DH59	782	C															
MAY	25 14:24	14.0	78.1		28.0	DH59	735	C															
MAY	26 18:27	16.0	84.4		28.0	DH59	671	C															
MAY	27 16:05	16.0	87.5		28.0	DH59	688	C															
MAY	28 19:50	15.0	46.2		28.0	DH59	376		102														
MAY	29 21:34	17.0	38.3		28.0	DH59	301																
MAY	30 18:50	17.0	33.6		28.0	DH59	208																
MAY	31 18:31	18.0	28.6		28.0	DH59	180	C															
JUN	02 19:07	17.0	30.5		28.0	DH59	184	C															
JUN	03 16:10	16.0	17.8		28.0	DH59	87	C															
JUN	04 17:24	15.0	15.3		28.0	DH59	87		116														
JUN	05 19:00	17.0	13.9		28.0	DH59	45																
JUN	06 18:50	19.0	12.7		28.0	DH59	28																
JUN	07 18:35	19.0	11.4		28.0	DH59	26																
JUN	08 13:42	18.0	10.6		28.0	DH59	21																
JUN	09 18:25	20.0	9.40		28.0	DH59	17																
JUN	10 18:00	19.0	8.38		28.0	DH59	22		132														
JUN	11 19:03	15.0	9.36		28.0	DH59	18																
JUN	12 18:00	15.0	17.1		28.0	DH59	215	C															
JUN	13 14:00	14.0	15.8		28.0	DH59	128	C															
JUN	14 11:25	15.0	12.8		28.0	DH59	87																
JUN	15 11:05	15.0	10.6		28.0	DH59	52		117														
JUN	16 19:05	17.0	9.83		28.0	DH59	22																
JUN	17 17:17	17.0	9.44		28.0	DH59	24																
JUN	18 16:47	18.0	10.0		28.0	DH59	30																
JUN	19 16:03	14.0	25.1	H	28.0	DH59	226	C	118														
JUN	21 10:05	11.0	82.2	H	28.0	DH59	835		118	11	16	28	38	60	81	78	99	100			39	45	16
JUN	23 18:22	17.0	22.2		28.0	DH59	148	C	109														
JUN	23 15:40	17.0	32.1		28.0	DH59	133	C	112														
JUN	27 14:00	17.0	12.2		28.0	DH59	84	C															
JUN	28 14:15	19.0	11.4		28.0	DH59	34																
JUN	29 11:00	17.0	10.3		28.0	DH59	38																
JUN	30 10:40	17.0	9.08		28.0	DH59	32	C															
JUL	01 10:18	17.0	8.17		28.0	DH59	23	C															
JUL	02 17:17	24.0	7.25		28.0	DH59	27	C															
JUL	04 19:05	15.0	8.41		28.0	DH59	18		131														
JUL	05 12:42	15.0	15.8		28.0	DH59	142	C															
JUL	06 11:00	14.0	33.1		28.0	DH59	480	C															
JUL	07 20:00	19.0	19.2		28.0	DH59	193	C															
JUL	08 13:30	20.0	17.1		28.0	DH59	105	C	103														
JUL	08 19:00	19.0	20.0		28.0	DH59	244	C															
JUL	10 18:00	18.0	28.9		28.0	DH59	322	C															
JUL	11 12:40	17.0	27.2		28.0	DH59	410	C															
JUL	12 14:00	13.0	59.0		28.0	DH59	830	C	118														
JUL	13 10:32	13.0	53.8		28.0	DH59	512	C															
JUL	14 18:07	13.0	48.8		28.0	DH59	399	C															
JUL	15 13:08	13.0	87.0		28.0	DH59	1260	C															
JUL	16 18:45	12.0	196		28.0	DH59	2550		126	14	19	30	38	55	75	90	98	100			25	54	19
JUL	17 10:03	10.0	215		28.0	DH59	2350		127	11	17	25	34	52	72	90	99	100			28	55	17
JUL	19 20:24	14.0	203		28.0	DH59	1860	C	133														
JUL	19 20:25	14.0	203		28.0	DH59	2230	C	122														
JUL	20 22:00	15.0	93.8		28.0	DH59	1080	C															
JUL	21 13:20	16.5	86.2		28.0	DH59	744	C															
JUL	22 19:14	18.0	41.9		28.0	DH59	411	C															
JUL	23 21:32	17.0	37.8		28.0	DH59	370	C															
JUL	24 15:45	15.0	82.0		28.0	DH59	1580	C															
JUL	25 20:12	15.0	46.7		28.0	DH59	470	C															
JUL	26 14:50	18.0	36.0		28.0	DH59	294	C															
JUL	27 12:25	15.0	33.0		28.0	DH59	224	C															
JUL	28 10:47	15.0	29.2		28.0	DH59	188	C	127														
JUL	29 20:25	14.0	31.4		28.0	DH59	205		114														
JUL	30 16:25	15.0	25.8		28.0	DH59	143	C															
AUG	01 13:05	17.0	23.5		28.0	DH59	120	C															
AUG	02 11:37	18.0	19.4		28.0	DH59	89																
AUG	03 14:00	20.0	16.1		28.0	DH59	88																
AUG	04 10:50	14.0	88.8		28.0	DH59	2520		119	12	22	28	27	57	75	89	97	100			25	53	22
AUG	05 19:30	18.0	42.1		28.0	DH59	594	C															
AUG	07 09:30	17.0	24.0		28.0	DH59	205	C															
AUG	10 18:50	21.0	13.4		28.0	DH59	33																
AUG	12 18:17	22.0	10.1		28.0	DH59	38		144														
AUG	15 17:32	18.0	8.83		28.0	DH59	35																
AUG	16 17:48	18.0	8.00		28.0	DH59	15		154														

NOTE : SINGLE VERTICAL LOCATED AT 28.0 METRES FOR 1986

DISCHARGE SYMBOL(S): H - DAILY MEAN
CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT

CONTINUED

ALBERTA

SWAN RIVER NEAR KINUSO - STATION NO. 07BJ001 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLA
AUG 21	20:10	15.0	4.49		28.0	DH59	14															
AUG 24	11:03	13.0	3.68		28.0	DH59	14															
AUG 29	08:50	14.0	2.73	V	28.0	DH59	12	181														
AUG 31	18:05	16.0	2.45	V	28.0	DH59	18															
SEP 03	17:30	17.0	2.87	V	28.0	DH59	16															
SEP 06	12:50	13.0	2.77	V	28.0	DH59	11															
SEP 09	18:42	14.0	2.20	V	28.0	DH59	10	178														
SEP 11	14:48	10.0	2.33	V	28.0	DH59	13	174														
SEP 15	14:33	8.0	4.00	V	28.0	DH59	25															
SEP 18	15:48	10.0	3.34	V	28.0	DH59	11	177														
SEP 21	14:56	11.0	2.87	V	28.0	DH59	11															
SEP 22	14:15	10.0	2.69	V	28.0	DH59	14	175														
OCT 04	13:00	7.0	15.9		28.0	DH59	821	120	13	18	25	32	43	55	75	96	100			46	39	1
OCT 14	15:51	8.0	13.7		28.0	DH59	55															
OCT 19	18:26	6.0	8.91		28.0	DH59	25	152														
OCT 27	15:10	3.5	8.17		28.0	DH59	11	157														

NOTE SINGLE VERTICAL LOCATED AT 28.0 METRES FOR 1986

DISCHARGE SYMBOL(S) V - DAILY MEAN, MANUAL GAUGE

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY APR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN
1969	----CCCCCC--	MANUAL	2 250	SEP 05	5	JUN 30	21 300	SEP 05	70 400	---	---	---
1970	--CCCCCCCCCC	MANUAL	2 190	JUN 29	8	AUG 24	35 000	JUN 29	182 000	851	851	---
1971	CCCCCCCCCCC	MANUAL	3 470	JUN 16	8	AUG 29	72 800	JUL 04	746 000	3 490	2 170	80 8
1972	CCCCCCCCCCC	MANUAL	4 450	JUN 18	6	DEC 19	70 000	JUN 18	400 000	1 870	2 070	37 1
1973	CCCCCCCCCCC	MANUAL	3 370	MAY 21	9	SEP 23	41 800	MAY 21	344 000	1 610	1 980	28 3
1974	CCCCCCCCCCC	MANUAL	5 060	JUL 13	10	SEP 27	103 000	JUL 13	518 000	2 420	2 080	21 5
1975	---CCCCCC--	MANUAL	4 020	AUG 31	10	OCT 28	88 700	JUN 28	544 000	2 540	2 130	17 3
1976	---PPPP-PP--	MANUAL	1 240	JUL 03	32	OCT 06	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	801	APR 25	9	OCT 27	---	---	---	---	---	---
1978	---P-PP-PP--	MANUAL	1 310	APR 27	16	OCT 26	---	---	---	---	---	---
1979	---CCCCCC---	MANUAL	6 010	JUN 14 *	14	AUG 27	140 000	JUN 14	884 000 *	---	---	---
1980	-P-CCCCCC--	MANUAL	1 500	JUN 05	22	JUN 18	21 700	MAY 28	151 000	705	1 830	19 3
1981	---P-CCCCC--	MANUAL	3 180	JUL 23	5	AUG 26	16 500	JUL 23	58 200	---	---	---
1982	---PCCCCCC--	MANUAL	2 240	JUL 16	1	OCT 23 *	25 000	JUL 16	259 000	---	---	---
1983	---PCCCCCC--	MANUAL	4 580	JUN 20	7	JUN 04	187 000	JUN 26 *	853 000	---	---	---
1984	--PCCCCCCP--	MANUAL	3 850	JUN 08	14	AUG 02	72 400	JUN 08	248 000	---	---	---
1985	---PCCCCCC--	MANUAL	3 800	MAY 04	7	AUG 02	60 300	JUN 25	385 000	---	---	---
1986	---PCCCCC---	MANUAL	2 550	JUL 18	10	SEP 08	95 400	JUL 18	532 000	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

TWIN CREEK NEAR SEEBE - STATION NO. 05BF018

LOCATION LAT 50 57 33 N LONG 115 10 19 W
DRAINAGE AREA 2.64 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAY 28	15:05	2.0	0.437	H	MID	X	DIP	31	105														

NOTE SINGLE VERTICAL IS UNDETERMINED FOR 1986

DISCHARGE SYMBOL(S) H - DAILY MEAN
VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

TWIN CREEK NEAR SEEBE - STATION NO. 05BF018

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1969	CCCCCCCCCCCC	MANUAL	8	APR 08	0	APR 15 *	0.37	MAY 25	2.57	0.01	0.01	---
1970	CCCCCCCCCCCC	MANUAL	20	JUN 10	0	JAN 05	0.37	JUN 10	3.40	0.01	0.01	0.0
1971	CCCCCCCCCCCC	MANUAL	88	JUN 05 *	0	JUN 01	8.68	JUN 05 *	19.7 *	0.08	0.03	78.2
1972	CCCCCCCCCCCC	MANUAL	17	JUN 10	0	MAY 26	0.86	JUN 10	5.40	0.02	0.03	56.1
1973	CCCCCCCCCCCC	MANUAL	11	JUN 07	0	FEB 20	0.39	JUN 24	3.80	0.02	0.03	44.1
1974	CCCCCCCCCCCC	MANUAL	35	JUN 17	0	MAR 14	2.06	JUN 17	9.41	0.04	0.03	36.5
1975	CC---CCCCCCC	MANUAL	3	JUN 04	0	JUL 25	0.04	JUN 12	1.27	---	---	---
1976	----CCCCCCCC	MANUAL	11	JUN 09	0	MAY 13	0.20	JUN 09	3.35	---	---	---
1977	CCCCCCCCCCCC	MANUAL	10	JUN 01	0	APR 28	0.15	JUN 07	0.93	0	0.03	34.5
1978	CCCCCCCCCCCC	MANUAL	16	JUN 09	0	MAY 31	0.58	JUN 06	3.82	0.02	0.03	30.2
1979	CCCCCCCCCCP-	MANUAL	8	JUN 05	0	JAN 17	0.18	JUN 12	1.81	0.01	0.02	40.4
1980	--CCCCCCCC--	MANUAL	7	MAY 28	1	MAY 15	0.18	MAY 27	5.50	0.02	0.02	38.1
1981	----CCCCCC--	MANUAL	10	MAY 28	0	MAY 17	0.43	MAY 27	3.98	---	---	---
1982	---CCCCCC--	MANUAL	18	JUN 19	0	JUL 20	0.59	JUN 19	5.71	---	---	---
1983	----PCCCC---	MANUAL	2	JUN 01	0	JUN 23	0.05	MAY 29	0.77	---	---	---
1985	----P-------	MANUAL	31	MAY 28	31	MAY 28	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

VERMILION RIVER NEAR MARWAYNE - STATION NO. 05EE007

LOCATION LAT 53 29 28 N LONG 110 23 51 W
DRAINAGE AREA 7 270 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 09	09:15	3.0	10.7	15.0	X DH48	100	315														
APR 23	15:30	6.0	10.7	12.0	X DH48	74	315														
MAY 28	13:00	15.0	2.17	MID	X DH48	33	514														
JUN 18	13:00	20.0	0.345	MID	X DH48	32	584														
JUL 16	14:30	15.0	0.225	MID	X DH48	9	831														
AUG 14	14:45	20.0	0.248	MID	X DH48	21	551														
SEP 11	13:00	15.0	0.043	MID	X DH48	16	705														
OCT 09	12:00	9.0	0.047	MID	X DH48	18	749														

NOTE: SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1979	-------P----	MANUAL	0	AUG 21	0	AUG 21 *	---	---	---	---	---	---
1980	---PPPPP----	MANUAL	233	APR 16 *	11	JUN 24	---	---	---	---	---	---
1981	---PPP------	MANUAL	35	APR 08	15	APR 28	---	---	---	---	---	---
1982	-------PPP-P-	MANUAL	77	NOV 03	33	AUG 11	---	---	---	---	---	---
1983	----PPPPPP--	MANUAL	106	JUL 20	14	JUN 09	---	---	---	---	---	---
1984	----PPPPPPP-	MANUAL	45	NOV 07	6	OCT 23	---	---	---	---	---	---
1985	---PPPPP----	MANUAL	127	APR 17	5	JUL 16	---	---	---	---	---	---
1986	---PPPPPPP--	MANUAL	100	APR 8	8	JUL 16	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ALBERTA

VERMILION RIVER NEAR VEGREVILLE - STATION NO. 05EE003

LOCATION: LAT 53 27 54 N LONG 112 03 52 W
DRAINAGE AREA: 1 590 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1988

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
APR 24	17 00		0.617	MID X	DH48	38	350														

NOTE SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY: MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1974	---------P--	MANUAL	5	OCT 09	5	OCT 09 *	---	---	---	---	---	---
1975	---------P--	MANUAL	5	OCT 09	5	OCT 09	---	---	---	---	---	---
1976	---P--------	MANUAL	38	APR 06	15	APR 28	---	---	---	---	---	---
									---	---	---	---
1978	---PP-------	MANUAL	44	APR 20	17	MAY 10	---	---	---	---	---	---
1979	----P-------	MANUAL	23	MAY 14	23	MAY 14	---	---	---	---	---	---
									---	---	---	---
1980	---P--------	MANUAL	52	APR 18	38	APR 28	---	---	---	---	---	---
1981	----P-------	MANUAL	7	APR 23	5	JUL 14	---	---	---	---	---	---
1982	------PPP---	MANUAL	68	JUL 07 *	22	AUG 12	---	---	---	---	---	---
1983	----P-PPPP--	MANUAL	51	JUL 05	20	SEP 29	---	---	---	---	---	---
1984	----PPP-----	MANUAL	56	JUN 06	17	JUL 11	---	---	---	---	---	---
									---	---	---	---
1985	---PPP------	MANUAL	52	APR 26	8	JUN 27	---	---	---	---	---	---
1988	---P--------	MANUAL	38	APR 24	38	APR 24	---	---	---	---	---	---
									---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

WAMPUS CREEK NEAR HINTON - STATION NO. 07AF003

SUSPENDED SEDIMENT FOR 1986

LOCATION: LAT 53 09 22 N LONG 117 15 40 W
DRAINAGE AREA: 26.4 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 830 TONNES FOR THE PERIOD MAY 28 TO OCT 31

REMARKS:

	MAY			JUN			JUL			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	0.205 B			0.479	4 S	0.17	0.289	16 S	0.40	1
2	0.178 B			0.424	2 S	0.07	0.243	4 S	0.08	2
3	0.343 B			0.368	3 S	0.10	0.219	3 S	0.06	3
4	0.680 B			0.330	3 S	0.09	0.208	7 S	0.13	4
5	0.827 B			0.316	1 S	0.03	0.327	7 S	0.20	5
6	1.17 B			0.420	6 S	0.22	0.383	8 S	0.26	6
7	1.24 B			0.391	4 S	0.14	0.478	11 S	0.45	7
8	0.878			0.326	1 S	0.03	0.610	10 S	0.53	8
9	0.732			0.294	2 S	0.05	0.817	24 S	1.90	9
10	0.740			0.282	1 S	0.02	0.796	7 S	0.48	10
11	0.706			0.384	3 S	0.10	0.612	2 S	0.11	11
12	0.674			0.328	8 S	0.26	0.557	3 S	0.14	12
13	0.525			0.281	6 S	0.15	0.502	2 S	0.09	13
14	0.458			0.264	3 S	0.07	0.447	5 S	0.19	14
15	0.426			0.304	2 S	0.05	0.618	79 S	4.23	15
16	0.844			0.268	1 S	0.02	2.70	502 S	140	16
17	0.777			0.248	1 S	0.02	6.59	474 S	270	17
18	0.881			0.235	1 S	0.02	6.49	258 S	145	18
19	0.881			0.274	3 S	0.07	3.02	102 S	26 S	19
20	0.844			0.251	3 S	0.07	1.84	50 S	8.38	20
21	0.868			0.223	2 S	0.04	1.43	40 S	4.84	21
22	0.880			0.211	2 S	0.04	1.18	45 S	4.63	22
23	1.11			0.204	2	0.04	1.32	28 S	3.19	23
24	1.03			0.194	1 S	0.02	1.10	20 S	1.90	24
25	0.862			0.184	2 S	0.03	0.853	18 S	1.19	25
26	0.810			0.178	1	0.02	0.820	7 S	0.50	26
27	0.777			0.174	0 S	0	0.695	5 S	0.30	27
28	0.728			0.177	2 S	0.03	0.654	8 S	0.45	28
29	0.857	8 S	0.45	0.203	8 S	0.11	0.786	10 S	0.68	29
30	0.584	4 S	0.20	0.299	7 S	0.18	0.810	3 S	0.18	30
31	0.528	6 S	0.27				0.528	6 S	0.27	31
TOTAL	21.886		0.92	8.519		2.26	37.945		617.44	TOTAL

	AUG			SEP			OCT			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	0.473	4 S	0.18	0.173	0	0	0.627	1	0.05	1
2	0.424	5 S	0.18	0.176	0	0	0.587	1	0.05	2
3	0.387	3 S	0.10	0.196	3	0.05	0.555	1	0.05	3
4	0.388	2 S	0.08	0.343	8 S	0.24	0.909	7	0.55	4
5	0.341	1 S	0.03	0.388	7	0.22	1.08	11	1.03	5
6	0.323	4 S	0.11	0.251	0	0	0.979	12 S	1.02	6
7	0.283	3 S	0.08	0.217	0	0	0.854	10	0.74	7
8	0.278	3 S	0.07	0.201	0 S	0	0.670	9	0.58	8
9	0.265	3 S	0.07	0.192	0	0	0.711	7	0.43	9
10	0.247	3 S	0.08	0.218	2	0.04	0.822	6	0.32	10
11	0.255	4 S	0.09	0.400	8 S	0.28	0.562	5	0.24	11
12	0.263	5 S	0.11	0.322	2	0.06	0.508	3	0.13	12
13	0.247	5 S	0.11	0.298	1	0.03	0.461	3	0.12	13
14	0.223	3 S	0.08	0.276	1	0.02	0.431	2	0.07	14
15	0.209	2 S	0.04	0.263	0 S	0	0.398	1	0.03	15
16	0.201	2 S	0.03	0.254	0	0	0.387	0	0	16
17	0.187	2 S	0.03	0.245	0	0	0.336	0	0	17
18	0.190	3 S	0.05	0.234	0	0	0.317	0	0	18
19	0.222	4 S	0.08	0.223	0	0	0.302	0	0	19
20	0.212	3 S	0.06	0.214	1	0.02	0.289	0	0	20
21	0.194	1 S	0.02	0.208	1	0.02	0.274	0	0	21
22	0.189	0 S	0	0.200	1 S	0.02	0.261	0	0	22
23	0.183	1 S	0.02	0.198	1	0.02	0.248	0	0	23
24	0.180	1 S	0.02	0.193	1	0.02	0.240	0	0	24
25	0.195	1 S	0.02	0.305	8	0.16	0.230	0	0	25
26	0.195	0 S	0	0.570	4	0.20	0.225	0	0	26
27	0.183	1 S	0.02	0.481	1	0.04	0.219	0	0	27
28	0.177	0 S	0	0.417	1	0.04	0.202	0	0	28
29	0.174	0	0	0.453	1 S	0.04	0.188	0	0	29
30	0.178	0	0	0.598	4	0.21	0.189	0	0	30
31	0.173	0	0				0.175 B	5	0.08	31
TOTAL	7.828		1.87	8.868		1.73	14.187		5.59	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

ALBERTA

WAMPUS CREEK NEAR HINTON - STATION NO. 07AF003

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLA
MAY	10 09:55		0.695	MID	DIP	2															
MAY	11 10:25		0.750	MID	DIP	7															
MAY	12 10:35		0.690	MID	DIP	10	54														
MAY	15 11:50		0.382	MID	DIP	10															
MAY	16 10:15		0.522	MID	DIP	5															
MAY	17 10:35		1.12	MID	DIP	17															
MAY	18 10:45		0.860	MID	DIP	9															
MAY	19 10:25		0.885	MID	DIP	8	55														
MAY	20 10:20		0.621	MID	DIP	2															
MAY	21 10:44		0.585	MID	DIP	1															
MAY	22 09:00		0.869	MID	DIP	7															
MAY	23 10:23		1.98	MID	DIP	24															
MAY	24 10:50		0.889	MID	DIP	13															
MAY	25 10:50		0.851	MID	DIP	10															
MAY	26 11:00		0.820	MID	DIP	8	58														
MAY	28 11:20		0.679	MID	DIP	5															
MAY	29 11:35		0.678	MID	DIP	7															
MAY	29 12:11	8.0	0.678	4.2 X	DH48	10	94														
MAY	30 10:15		0.615	MID	DIP	4															
MAY	31 11:00		0.532	MID	DIP	7															
JUN	01 12:10		0.463	MID	DIP	4															
JUN	02 11:15		0.434	MID	DIP	2	72														
JUN	03 10:18		0.372	MID	DIP	3															
JUN	04 10:35		0.377	MID	DIP	3															
JUN	05 11:25		0.345	MID	DIP	0															
JUN	06 10:05		0.423	MID	DIP	7															
JUN	07 10:25		0.382	MID	DIP	4															
JUN	08 10:10		0.357	MID	DIP	0															
JUN	09 10:00		0.360	MID	DIP	3	76														
JUN	10 11:24		0.302	MID	DIP	1															
JUN	11 13:18		0.537	MID	DIP	2															
JUN	12 16:10		0.513	MID	DIP	8															
JUN	13 10:10		0.285	MID	DIP	7															
JUN	14 09:15		0.259	MID	DIP	3															
JUN	15 10:40		0.372	MID	DIP	1															
JUN	16 10:40		0.282	MID	DIP	1	82														
JUN	17 08:30		0.281	MID	DIP	1															
JUN	18 08:15		0.292	MID	DIP	1															
JUN	19 09:36		0.301	MID	DIP	2															
JUN	20 10:17		0.280	MID	DIP	3															
JUN	21 12:15		0.198	MID	DIP	2															
JUN	22 12:30		0.187	MID	DIP	2															
JUN	24 12:35		0.172	MID	DIP	1															
JUN	25 12:55		0.186	MID	DIP	3															
JUN	27 11:31		0.148	MID	DIP	0															
JUN	28 12:00		0.197	MID	DIP	2															
JUN	29 10:28		0.124	MID	DIP	4															
JUN	30 12:45		0.267	MID	DIP	5	92														
JUL	01 10:30		0.419	MID	DIP	20															
JUL	02 10:55		0.424	MID	DIP	3															
JUL	03 12:55		0.404	MID	DIP	3															
JUL	04 12:55		0.207	MID	DIP	7															
JUL	05 12:05		0.350	MID	DIP	7															
JUL	06 11:25		0.307	MID	DIP	5															
JUL	07 11:55		0.620	MID	DIP	12															
JUL	08 11:15		0.389	MID	DIP	3															
JUL	09 09:45		0.747	MID	DIP	15															
JUL	09 17:15		1.17	MID	DIP	39															
JUL	10 07:25		0.778	MID	DIP	9															
JUL	11 09:00		0.852	MID	DIP	2															
JUL	12 11:49		0.524	MID	DIP	3															
JUL	13 10:00		0.532	MID	DIP	2															
JUL	14 10:00		0.381	MID	DIP	5															
JUL	15 09:45	8.0	0.704	2.5 X	DH48	57	96														
JUL	15 12:00		0.644	MID	DIP	21															
JUL	16 11:10		4.37	MID	DIP	747															
JUL	17 08:45		4.67	MID	DIP	380															
JUL	18 12:00E		6.49 H	MID	DIP	231															
JUL	19 10:40		3.11	MID	DIP	110															
JUL	20 11:52		1.92	MID	DIP	47															
JUL	21 16:00		1.34	MID	DIP	39															
JUL	22 16:35		1.07	MID	DIP	52															
JUL	23 11:10		1.17	MID	DIP	20															
JUL	24 13:15		1.27	MID	DIP	30															
JUL	25 11:05		0.971	MID	DIP	15															
JUL	26 11:05		0.882	MID	DIP	5															
JUL	27 11:00		0.882	MID	DIP	5															
JUL	28 10:30		0.862	MID	DIP	8															
JUL	29 11:25		0.879	MID	DIP	10															
JUL	30 12:20		0.868	MID	DIP	2															
JUL	31 10:07	7.0	0.540	2.8 X	DH48	10	95														
JUL	31 12:30		0.523	MID	DIP	5															
AUG	01 14:55		0.449	MID	DIP	3															
AUG	02 09:20		0.428	MID	DIP	5															
AUG	03 11:10		0.354	MID	DIP	3															
AUG	04 12:15		0.320	MID	DIP	2															
AUG	05 10:55		0.300	MID	DIP	0															
AUG	06 11:38		0.854	MID	DIP	4															
AUG	07 11:10		0.235	MID	DIP	3															
AUG	08 11:15		0.210	MID	DIP	3															
AUG	09 09:40		0.198	MID	DIP	3															
AUG	10 09:45		0.223	MID	DIP	3															
AUG	11 10:35		0.208	MID	DIP	2															
AUG	12 09:00		0.233	MID	DIP	4															
AUG	13 11:35		0.194	MID	DIP	5															
AUG	14 10:45		0.172	MID	DIP	5															
AUG	15 10:50		0.123	MID	DIP	3															
AUG	16 08:45		0.178	MID	DIP	2															
AUG	17 09:35		0.150	MID	DIP	2															
AUG	18 11:30		0.132	MID	DIP	1															
AUG	19 11:10		0.169	MID	DIP	3															
AUG	20 11:10		0.129	MID	DIP	4															
						3															

NOTE - SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

TIME SYMBOL - E - ESTIMATED
DISCHARGE SYMBOL(S) - H - DAILY MEAN
VERTICAL SYMBOL(S) - X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

CONTINUED

WAMPUS CREEK NEAR HINTON - STATION NO. 07AF003 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
AUG 21	10:20		0.112	MID	DIP	0															
AUG 22	11:50		0.122	MID	DIP	0															
AUG 23	09:15		0.110	MID	DIP	1															
AUG 24	10:50		0.117	MID	DIP	1															
AUG 25	11:10		0.118	MID	DIP	1															
AUG 26	12:55		0.113	MID	DIP	0															
AUG 27	14:40		0.181	MID	DIP	2															
AUG 28	11:50		0.176	MID	DIP	0															
SEP 04	12:55		0.335	MID	DIP	8															
SEP 08	10:35		0.142	MID	DIP	0															
SEP 11	14:00		0.384	MID	DIP	4															
SEP 11	18:13	8.0	0.371	MID	DIP	10	109														
SEP 15	10:35		0.262	MID	DIP	0															
SEP 22	13:00		0.199	MID	DIP	1															
SEP 29	13:00		0.434	MID	DIP	1															
OCT 08	12:10		0.972	MID	DIP	12															

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY APR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1967	-----CCCCC--	MANUAL	150	JUN 08	0	SEP 08 *	85.9	JUN 08	150	---	---	---
1968	----CCCCCC--	MANUAL	43	MAY 10	1	SEP 18	8.70	JUL 22	78.9	---	---	---
1969	----CCCCCC--	MANUAL	1 090	AUG 05	0	SEP 24	752	AUG 05	1 970	---	---	---
1970	----CCCCCC--	MANUAL	187	MAY 10	1	SEP 08	47.5	JUN 15	185	---	---	---
1971	---CCCCCC--	MANUAL	408	JUN 08	3	AUG 16	186	JUN 08	592	2.77	2.77	---
1972	----CCCCCC--	MANUAL	582	JUN 25	1	AUG 23	336	JUN 25	738	---	---	---
1973	---CCCCCC--	MANUAL	301	MAY 16	1	SEP 18	135	MAY 16	754	3.53	3.16	12.1
1974	---CCCCCC--	MANUAL	130	JUL 12	3	JUL 03	13.7	MAY 08	175	0.82	2.37	34.1
1975	---CCCCCCC--	MANUAL	108	MAY 08	2	JUL 28	8.67	MAY 08	67.8	0.32	1.86	41.3
1976	---CCCCCCC--	MANUAL	111	JUN 16	3	JUL 27	11.6	JUN 18	88.0	0.46	1.58	41.6
1977	---CCCCCCC--	MANUAL	830	MAY 11	3	APR 21	233	MAY 28	1 340	5.25	2.36	40.1
1978	---CCCCCCC--	MANUAL	414	MAY 18	4	SEP 01	145	MAY 16	464	2.17	2.33	34.3
1979	----CCCCC---	MANUAL	136	JUN 20	0	JUL 19	12.1	JUN 20	73.3	---	---	---
1980	---CCCCC----	MANUAL	282	JUN 17	1	SEP 10	1 830	JUN 04 *	3 500 *	---	---	---
1981	----CCCCCP--	MANUAL	237	MAY 15	1	MAY 05	40.2	JUL 30	252	---	---	---
1982	---CCCCCCP-	MANUAL	1 010	JUL 04	1	JUN 17	384	JUL 04	812	3.80	2.52	28.4
1983	---CCCCCCP-	MANUAL	378	JUN 24	0	JUL 28	30.5	JUN 24	86.8	0.45	2.29	29.3
1984	--PCCCCCCC--	MANUAL	288	MAY 13	0	MAY 13	13.5	JUN 08	108	0.51	2.11	29.7
1985	---CCCCCCC--	MANUAL	1 830	AUG 15 *	0	APR 20	44.2	AUG 15	170	0.80	1.99	29.1
1986	----PCCCCC--	MANUAL	747	JUL 15	0	JUN 05	270	JUL 17	830	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

WASKATENAU CREEK NEAR WASKATENAU - STATION NO. 05EC002

LOCATION: LAT 54 07 23 N LONG 113 46 58 W
DRAINAGE AREA: 312 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 15	12:00	0.0	0.385	MID	DIP	8	277														
MAY 13	11:00	11.0	0.052	MID	DIP	5	387														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

WASKATENAU CREEK NEAR WASKATENAU - STATION NO. 05EC002

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	HISTORICAL STANDARD ERROR OF MEAN %
1974	-------PP---	MANUAL	7	AUG 14	5	SEP 18	---	---	---	---	---	---
1975	------PPPP--	MANUAL	3	JUL 14	1	SEP 10	---	---	---	---	---	---
1976	---PPPP-P---	MANUAL	159	APR 04 *	5	MAY 20	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	8	APR 18	1	AUG 08	---	---	---	---	---	---
1978	---PPPPPPP--	MANUAL	24	APR 13	2	JUL 27	---	---	---	---	---	---
1979	---PPPPPP---	MANUAL	79	APR 22	0	AUG 23 *	---	---	---	---	---	---
1980	---P-PPPP---	MANUAL	7	APR 23	5	JUL 14	---	---	---	---	---	---
1981	----P--------	MANUAL	12	MAY 27	12	MAY 27	---	---	---	---	---	---
1982	---P---------	MANUAL	8	APR 27	8	APR 27	---	---	---	---	---	---
1985	---PPP-------	MANUAL	11	MAY 22	5	APR 24	---	---	---	---	---	---
1986	---PP--------	MANUAL	8	APR 15	5	MAY 13	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

WATERTON RIVER NEAR GLENWOOD - STATION NO. 05AD026

LOCATION LAT 49 26 35 N LONG 113 28 10 W
DRAINAGE AREA 1 830 km²
TYPE OF FLOW REGULATED SINCE 1986
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 04	10 30	1.0	25.9	22.0 X	DH59	53	142														
MAR 25	13 40	2.0	13.9	16.0 X	DH59	10	151														
APR 30	10 30	5.0	30.6	20.0 X	DH59	21	151														
MAY 27	10 45	14.0	60.4	22.0 X	DH59	81	126														
JUN 02	12 15	14.0	138	41.0 X	DH59	148	105														
JUN 02	12 20	14.0	138	41.0 X	DH59	134	107														
JUN 09	11 15	13.0	82.8	22.0 X	DH59	21	110														
JUN 25	14 15	25.0	2.38	16.0 X	DIP	1	120														
JUL 29	15 20	19.0	1.34	11.0 X	DIP	5	185														
AUG 26	15 00	22.0	3.45	14.0 X	DIP	3	188														
NOV 05	12 20	4.0	1.79	17.0 Y	DH48	1	197														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	HISTORICAL STANDARD ERROR OF MEAN %
1974	------P-PP---	MANUAL	5	JUL 24	1	OCT 08	---	---	---	---	---	---
1975	----PPP-PPP-	MANUAL	124	MAY 13	0	SEP 03 *	---	---	---	---	---	---
1976	---PPPPPPP--	MANUAL	43	APR 14	4	JUL 29	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	29	OCT 18	3	APR 26	---	---	---	---	---	---
1978	---PPPPPP-P-	MANUAL	1 120	MAY 17 *	2	NOV 02	---	---	---	---	---	---
1979	---PPPPPPP--	MANUAL	113	MAY 30	0	JUL 28	---	---	---	---	---	---
1980	--PPPPP-PPP-	MANUAL	186	MAY 05	3	JUL 31	---	---	---	---	---	---
1981	--PPPPPPP-P-	MANUAL	233	MAY 27	3	AUG 24	---	---	---	---	---	---
1982	---PPPPPP---	MANUAL	42	JUN 23	1	AUG 25	---	---	---	---	---	---
1983	---PPPPPP-P-	MANUAL	181	MAY 30	4	JUL 28	---	---	---	---	---	---
1984	--PPPPPP-----	MANUAL	36	JUN 28	3	MAY 01	---	---	---	---	---	---
1985	---PPPPPPP--	MANUAL	53	MAY 29	2	MAY 01	---	---	---	---	---	---
1986	--PPPPPP--P-	MANUAL	149	JUN 02	1	JUN 25	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

WEST PRAIRIE RIVER NEAR HIGH PRAIRIE - STATION NO. 07BF002

LOCATION: LAT 55 25 50 N LONG 116 29 30 W
DRAINAGE AREA: 1 180 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1988

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 22	14:45	5.0	31.1	25.0 X	DH59	2320	117	9	14	23	38	62	88	93	93	99			62	44	14
MAY 20	13:30	18.0	10.0	20.0 X	DH48	210 C	134														
MAY 23	15:40	12.0	27.8	20.0 X	DH59	1980	156	13	17	27	34	48	83	74	93	99			37	46	17
JUN 16	17:45	18.0	1.60	4.0 X	DH48	45	247														
JUL 14	13:30	18.0	3.00	5.0 X	DH48	1400	183														
AUG 25	11:55	18.0	0.389	MID X	DH48	5	238														
SEP 22	11:10	13.0	0.310	MID X	DH48	22	253														
OCT 27	13:30	4.0	1.32	MID X	DH48	18	174														

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1988

CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1974	---PP--P-P--	MANUAL	3 260	APR 23	13	AUG 29	---	---	---	---	---	---
1975	---PPP-PP---	MANUAL	1 630	APR 26	22	SEP 25	---	---	---	---	---	---
1976	---PPPPPPP--	MANUAL	8 930	JUN 27	47	OCT 29	---	---	---	---	---	---
1977	---PPPPPPP--	MANUAL	2 430	APR 13	15	SEP 21	---	---	---	---	---	---
1978	-------PPPP--	MANUAL	78	SEP 27	13	AUG 28	---	---	---	---	---	---
1979	---PPPPPP---	MANUAL	4 250	JUL 04	28	SEP 19	---	---	---	---	---	---
1980	----PPPPPP--	MANUAL	341	JUN 03	19	OCT 27	---	---	---	---	---	---
1981	-----P-P-----	MANUAL	253	MAY 27	10	JUL 07	---	---	---	---	---	---
1982	---PP-P-PP---	MANUAL	1 280	MAY 03	40	OCT 04	---	---	---	---	---	---
1983	---P-PPPPP---	MANUAL	8 600	JUL 28 *	33	OCT 24	---	---	---	---	---	---
1984	---PPPP-P---	MANUAL	5 730	JUN 08	7	SEP 04	---	---	---	---	---	---
1985	---PPPPPP---	MANUAL	2 140	MAY 06	5	JUL 25 *	---	---	---	---	---	---
1986	---PPPPPPP--	MANUAL	2 320	APR 22	6	AUG 25	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

WILLOW CREEK ABOVE CHAIN LAKES - STATION NO. 05AB028

LOCATION LAT 50 11 47 N LONG 114 12 46 W
DRAINAGE AREA 162 km²
TYPE OF FLOW NATURAL
TYPE OF GAUGE RECORDING

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1988

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
APR 01	13:45	4.0	0.704	1.0 X	DIP	3	181														
APR 29	12:30	4.0	1.31	1.0 X	DIP	11	189														
MAY 22	14:10	5.0	5.69	10.0 X	DH48	83	142														
MAY 23	10:35	6.0	5.78	5.0 X	DH48	50	147														
MAY 26	14:30	15.0	4.81	5.0 X	DH48	35	145														
JUN 24	12:40	14.0	0.788	4.0 X	DH48	4	178														
JUL 29	08:10	15.0	0.301	WELR X	DIP	12	182														
AUG 30	12:00	15.0	0.112	WELR X	DIP	3	208														
SEP 30	11:30	6.0	0.811	MID X	DH48	3	174														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1988

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

ALBERTA

WILLOW CREEK ABOVE CHAIN LAKES - STATION NO. 05AB023

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY JAN-DEC MEAN LOAD (TONNES)	SUMMARY JAN-DEC HISTORICAL MEAN LOAD (TONNES)	SUMMARY JAN-DEC STANDARD ERROR OF MEAN %
1985	-----CCCCC--	MANUAL	1 890	JUN 17	1	AUG 15	2 230	JUN 18	5 410	---	---	---
1986	--CCCCCCCCCC	MANUAL	1 400	JUN 04	1	JUL 27	872	JUN 05	2 330	---	---	---
1987	CCCCCCCCCCCC	MANUAL	1 350	MAY 21	2	AUG 01	7 180	MAY 31 *	30 800 *	84.6	84.6	---
1988	CCCCCCCCCCCC	MANUAL	190	APR 01	1	JUL 17	64.4	JUN 07	588	1.80	43.1	98.3
1989	CCCCCCCCCCCC	MANUAL	2 080	JUN 29 *	0	JUL 24 *	4 850	JUN 28	18 700	51.3	45.8	92.7
1970	CCCCCCCCCCCC	MANUAL	1 740	MAY 05	0	SEP 17	801	MAY 05	3 300	9.04	38.5	92.9
1971	CCCCCCCCCCCC	MANUAL	178	JUN 08	0	JUN 22	180	JUN 08	858	1.40	29.7	96.7
1972	CCCCCCCCCCCC	MANUAL	91	MAY 15	0	JUN 21	88.5	MAY 14	1 130	3.09	35.2	96.4
1973	CCCCCCCCCCCC	MANUAL	384	MAY 25	0	NOV 19	340	MAY 25	1 250	3.41	32.1	96.2
1974	CCCCCCCCCCCC	MANUAL	265	APR 28	0	JAN 21	374	APR 27	1 710	4.87	19.8	95.1
1975	CCCCCCCCCCCC	MANUAL	1 390	JUN 20	1	JAN 06	4 820	JUN 20	8 830	24.5	20.4	47.5
1976	CCCCCCCCCCCC	MANUAL	880	AUG 08	0	SEP 20	1 190	AUG 08	2 980	8.13	19.2	45.6
1977	CCCCCCCCCCCC	MANUAL	25	APR 08	1	JUN 12	2.31	APR 08	45.9	0.13	17.5	46.3
1978	PPPPPPPPPP--	MANUAL	40	MAR 17	0	JAN 03	---	---	---	---	---	---
1980	---PPPPPP-P-	MANUAL	28	MAY 28	4	AUG 26	---	---	---	---	---	---
1981	--P-PP-PPP--	MANUAL	413	MAY 22	4	SEP 02	---	---	---	---	---	---
1982	---PPPP-P---	MANUAL	44	JUN 07	1	SEP 14	---	---	---	---	---	---
1983	---PPPPP-P--	MANUAL	40	MAY 25	2	JUL 19	---	---	---	---	---	---
1984	---PPPP-----	MANUAL	28	APR 05	1	MAY 01	---	---	---	---	---	---
1985	-----PPPPPP--	MANUAL	31	JUL 11	2	MAY 01	---	---	---	---	---	---
1986	---PPPPPP---	MANUAL	82	MAY 22	3	APR 01	---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

WILLOW CREEK NEAR CLARESHOLM - STATION NO. 05AB021

LOCATION LAT 50 01 05 N LONG 113 42 50 W
DRAINAGE AREA 1 180 km²
TYPE OF FLOW REGULATED SINCE 1966
TYPE OF GAUGE MANUAL

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1986

DATE	TIME	WATER TEMP (°C)	INSTANT DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT CONCENT (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	PERCENT SILT	PERCENT CLAY
APR 03	11 15	4.0	1.59	4.0	X	DH48	32	229														
MAY 01	11 15	9.0	2.67	14.0	X	DH48	185	247														
MAY 28	14 00	22.0	7.79	16.0	X	DH48	65	211														
JUN 10	08 05	12.0	5.86	14.0	X	DH48	35	237														
JUL 03	11 15	17.0	1.27	10.5	X	DH48	14	213														
AUG 14	15 15	19.0	0.674	3.0	X	DH48	10	192														
SEP 09	11 35	12.0	0.871	8.0	X	DIP	3	213														
SEP 29	10 00	8.0	1.52	17.0	X	DIP	7	275														
NOV 03	09 15	1.5	1.31	17.5	X	DIP	3	265														

NOTE SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1986

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

ALBERTA

WILLOW CREEK NEAR CLARESHOLM - STATION NO. 05AB021

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			SAMPLED CONCENTRATION MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)			SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY - JAN-DEC MEAN LOAD (TONNES)	SUMMARY - JAN-DEC HISTORICAL MEAN LOAD (TONNES)	SUMMARY - JAN-DEC STANDARD ERROR OF MEAN %
1984	---CCCCCCCCC	MANUAL	3 150	MAY 05		13	OCT 15		7 800	MAY 07		58 100	---	---	---
1985	CCCCCCCCCCCC	MANUAL	3 050	JUN 18		3	SEP 17		8 880	JUN 18		27 000	73 9	73 9	---
1986	CCCCCCCCCCCC	MANUAL	2 280	JUN 05		4	AUG 26		6 580	JUN 05		23 800	65 2	89 6	6 3
1987	CCCCCCCCCCCC	MANUAL	4 450	MAY 31		8	SEP 22		31 300	MAY 31		138 000	381	173	60 0
1988	CCCCCCCCCCCC	MANUAL	837	JUN 12		5	AUG 30		837	JUN 08		3 820	9 89	132	63 7
1989	CCCCCCCCCCCC	MANUAL	4 540	JUN 25		0	SEP 28	*	40 800	JUN 30	*	218 000	591	224	50 3
1970	CCCCCCCCCCCC	MANUAL	2 980	JUN 14		0	OCT 23		12 300	JUN 14		26 000	78 8	200	47 5
1971	CCCCCCCCCCCC	MANUAL	1 030	JUN 07		2	NOV 01		2 020	JUN 07		10 200	27 9	178	48 0
1972	CCCCCCCCCCCC	MANUAL	2 080	MAR 11		0	OCT 02		5 880	MAY 28		44 100	121	168	43 5
1973	CCCCCCCCCCCC	MANUAL	778	MAY 27		1	OCT 05		2 080	MAY 27		10 200	27 8	153	43 3
1974	CCCCCCCCCCCC	MANUAL	2 410	MAY 01		1	OCT 18		5 540	MAY 01		38 700	106	148	40 2
1975	PPPPPPPPPPPP	MANUAL	5 210	JUN 20	*	5	JAN 05		---	---		---	---	---	---
1976	--PPPPPPP-P-	MANUAL	288	AUG 12		4	NOV 03		---	---		---	---	---	---
1977	---PPPPPPP--	MANUAL	19	APR 13		1	OCT 31		---	---		---	---	---	---
1978	--PPPPPPP--	MANUAL	784	MAR 26		3	OCT 30		---	---		---	---	---	---
1979	---PPPPPPP--	MANUAL	121	MAY 28		0	AUG 20		---	---		---	---	---	---
1980	--PPPP-P-P-	MANUAL	187	APR 14		5	JUL 28		---	---		---	---	---	---
1981	--PPPPPPP--	MANUAL	1 670	MAY 23		5	OCT 26		---	---		---	---	---	---
1982	---PPPPPP---	MANUAL	130	APR 23		6	SEP 27		---	---		---	---	---	---
1983	----PP-PPP--	MANUAL	28	JUN 24		4	OCT 31		---	---		---	---	---	---
1984	--PP-PP ----	MANUAL	9	JUL 30		3	JUN 25		---	---		---	---	---	---
1985	----P-PPP-P-	MANUAL	12	MAY 31		3	NOV 01		---	---		---	---	---	---
1986	---PPPPPP-P-	MANUAL	185	MAY 01		3	SEP 09		---	---		---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

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05CC002	RED DEER RIVER AT RED DEER	59
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05CK004	RED DEER RIVER NEAR BINDLOSS	61
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07AF003	WAMPUS CREEK NEAR HINTON	78
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07AF005	EUNICE CREEK NEAR HINTON	21
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